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jc530 U.S. PTO
03/04/99

REV. 11/98
For Other Than A Small Entity

Docket No. UV-81

jc518 U.S. PTO
09/262658
03/04/99

Applicants : Joshua Rosenthal et al.

For : PROGRAM GUIDE SYSTEM WITH USER FAVORITE THEMES

EXPRESS MAIL CERTIFICATION

"Express Mail" mailing label number EH623270254US.

Date of Deposit March 3, 1999.

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Jin Li

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for Patents
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March 3, 1999

TRANSMITTAL LETTER FOR
ORIGINAL PATENT APPLICATION

Sir:

Transmitted herewith for filing are the [X] specification; [X] claims; [X] abstract; [X] declaration and [X] power of attorney, for the above-identified patent application.

Also transmitted herewith are:

[X] 16 sheets of:

[ ] Formal drawings.

[X] Informal drawings. Formal drawings will be filed during the pendency of this application.

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from which priority is claimed.

[ ] An assignment of the invention to _____
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FOR	NUMBER FILED	NUMBER EXTRA	RATE	FEE
BASIC FEE				$ 760.00
TOTAL CLAIMS	113	- 20 = 93	X $ 18 =	$1674.00
INDEPENDENT CLAIMS	8	- 3 = 5	X $ 78 =	$ 390.00
[ ] MULTIPLE DEPENDENT CLAIMS			+ $260 =	$
			TOTAL	$2824.00

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[ ] This application is being filed unaccompanied by a filing fee. The appropriate filing fee will be paid in response to a Notice to File Missing Parts, pursuant to 37 C.F.R. § 1.53(d).

[X] The Commissioner is hereby authorized to charge payment of any additional filing fees required under 37 C.F.R. § 1.16, in connection with the paper(s) transmitted herewith, or credit any overpayment of same, to deposit Account No. 06-1075. A duplicate copy of this transmittal letter is transmitted herewith.

[ ] Amend the specification by inserting before the first line the sentence: -- This is a [ ] continuation-in-part, of application Serial No.: _____, filed _____ entitled _____ _____ _____ _____.

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PROGRAM GUIDE SYSTEM WITH USER DESIGNATED FAVORITE THEMES

Cross-reference to Related Applications

This application claims the benefit of United States provisional application No. 60/089,730, filed June 18, 1998.

Background of the Invention

This invention relates to interactive television program guides, and more particularly, to television program guides in which users may select particular subsets of programming by theme or genre.

Cable, satellites, and broadcast television systems provide users with a large number of television channels. Users have traditionally consulted printed television program schedules to determine the programs being broadcast at a particular time. More recently, interactive electronic television program guides have been developed that allow television program information to be displayed on a user's television.

Interactive program guides are typically implemented on set-top boxes. Such program guides allow users to view television program listings in different display formats. For example, a user may

instruct the program guide to display a grid or table of program listings organized in a channel-ordered or a time-ordered list. Users may also search and sort program listings by genre (e.g., movies, sports, etc.) or by title (i.e., alphabetically). A user may obtain additional information for a program by placing a highlight region on a desired program listing and pressing an "info" button. The user may purchase a pay program from the program guide by placing the highlight region on a program listing and pressing an "OK" button. Some systems allow the user to select a program for recording by placing the highlight region on a program listing and pressing a "record" button.

Because there are so many television channels available, particularly with cable and satellite television systems, television program guides have been developed that allow users to select favorite channels. During tuning, the program guide may allow the user to tune to favorite channels only, while skipping all other channels. Alternatively, the table of program listings may be displayed to reflect the favorite channels. For example, the table of program listings may display only the favorite channels and suppress all other channels from view. According to another approach, all channels are displayed. However, when the user scans through the table of program listings, the cursor control, which highlights a program and allows the user to make a selection, will advance among the favorite channels and skip over the other channels.

Another approach to assist the user to select among the television channels available is allow users to select themes. It is desirable to have as many

themes as possible to increase the likelihood of matching the viewer's interests. However, the list of themes may be consequently quite long, making it cumbersome for a viewer to find the desired programs. The user is often required to scroll through long lists of themes to find the desired theme.

Some program guides address this abundance of information by having hierarchical categories. First, the user is presented with a relatively short list of higher level categories. The user selects a higher level category. Subsequently, the program guide displays a list of subcategories, from which the user may select one or more subcategories. This process may continue through several levels of subcategorization. This organization structure has several disadvantages as well. While the list of themes at each level may be relatively short and easier to view, a drawback is that the user may not readily appreciate which high level category will lead to a desired specific theme at a lower level. The user may be required to enter multiple keystrokes to find the desired theme.

After such searching with either display method, the user may eventually locate the desired theme after a tedious process, and discover that the program guide does not have any program listings for the desired theme. Moreover, the user is required to repeat this process whenever a search by specific theme is desired.

What is needed is a more sophisticated way in which a user may inform a program guide of the user's theme preferences, so that the program guide can display programming themes in a more useful manner.

It is therefore an object of the present invention to provide an interactive program guide system in which the user may designate certain themes as favorites.

It is also an object of the invention to provide program listings which display programming having the user's favorite themes.

Summary of the Invention

These and other objects of the invention are accomplished in accordance with the principles of the present invention by providing an interactive television program guide system in which an interactive television program guide is at least partially implemented on user equipment of a user. In a client-server architecture, the program guide may also be implemented on a server located at a television distribution facility. The user equipment may be user television equipment or user personal computer equipment. The program guide displays a list of programming themes, and provides an option with the interactive program guide for the user to select a programming theme from the list of programming themes and a level of interest in that theme that is indicative of the user's television programming interests. The program guide may also provide a means for modifying the list of programming themes based on the selected programming theme and level of user interest. In one embodiment, the interactive television program guide provides an option for the user to select a programming theme as a favorite, i.e., indicative of a generally high level of user interest.

The interactive television program guide may also be modified to display the selected programming theme at the top of the list of programming themes and shift the remaining programming themes lower in the list. The interactive program guide may also have means for providing an option to select a programming theme from the list of themes as a search criterion for searching the program listings data. In addition, means may be provided for displaying a list of programming having the theme selected as a search criterion.

In another embodiment, the interactive television program guide provides an option for the user to select a programming theme with a low level of user interest. The implementation of the interactive television program guide system may also provide several options for the display of the selected theme. According to one option, the program guide may be implemented to display the selected programming theme at the bottom of the list of programming themes. According to another option, the program guide may be implemented to suppress the selected theme from the list of themes. The suppressed themes may be subsequently restored to the themes list, if desired.

In another preferred embodiment, the interactive television program guide system is implemented to provide an option to selectively increment the position of the selected theme in the themes list. For example, the program guide may permit the user to numerically designate the position of the selected theme in the themes list.

In yet another preferred embodiment, the interactive television program guide system is

implemented to display a list of programming themes and to provide an option to select a plurality of programming themes as favorites. The means for modifying the list of themes includes means for displaying the selected favorites in a distinctive manner, such as a predetermined color or with an icon or label designation. Moreover, the interactive program guide system provides means for providing an option to designate the selected themes as search criteria for searching the programming listings data.

Further features of the invention, its nature and various advantages will be more apparent from the accompanying drawings and the following detailed description of the preferred embodiments.

Brief Description of the Drawings

FIG. 1 is a diagram of a system in which an interactive television program guide is implemented in accordance with the present invention.

FIG. 2 is a flow chart of steps involved in providing options to the user for selecting various display and search criteria in accordance with the present invention.

FIG. 3 is an illustrative interactive screen for displaying themes and selecting display options in accordance with the present invention.

FIG. 4 is a flow chart of steps involved in providing options for selecting display configurations in accordance with the present invention.

FIG. 5 is an illustrative interactive screen similar to FIG. 3, depicting a modified display configuration in accordance with the present invention.

FIG. 6 is a flow chart of steps involved in selecting search criteria and searching the programming listings data.

FIG. 7 is a flow chart of steps involved in organizing themes information in a preference profile.

FIG. 8(a) is an illustrative by-time program listings display in accordance with the present invention.

FIG. 8(b) is an alternative embodiment of an illustrative by-time program listings display in accordance with the present invention.

FIG. 9 is a flow chart, similar to FIG. 4, of steps involved in providing options to the user for selecting various display and search criteria in accordance with an alternative embodiment of the present invention.

FIG. 10 is a flow chart illustrating further steps involved in providing options for selecting display configurations in accordance with the present invention.

FIG. 11 is an illustrative screen for selecting display options in accordance with the present invention.

FIG. 12 is an illustrative interactive screen, similar to FIG. 3, for displaying themes and selecting display options in accordance with an alternative embodiment of the present invention.

FIG. 13 is a flow chart illustrating further steps involved in providing options for selecting display configurations in accordance with the present invention.

FIG. 14 is an alternative embodiment of an illustrative screen, similar to FIG. 12, for displaying themes and selecting display options in accordance with the present invention.

FIG. 15 is another flow chart illustrating further steps involved in providing options for selecting display configurations in accordance with the present invention.

FIG. 16 is an illustrative interactive screen for displaying themes and selecting display options in accordance with another alternative embodiment of the present invention.

FIG. 17 is an illustrative interactive screen for displaying themes and selecting display options in accordance with yet another alternative embodiment of the present invention.

FIG. 18 is an illustrative interactive screen for displaying favorite themes and selecting display options according to the present invention.

Detailed Description of the Preferred Embodiments

An illustrative program guide system 10 in accordance with the present invention is shown in FIG. 1. Main facility 12 contains a program guide database 14 for storing program guide information such as television program guide listings data, pay-per-view ordering information, television program promotional information, etc. Information from database 14 may be transmitted to television distribution facility 15 via communications link 16. Link 16 may be a satellite link, a telephone network link, a cable or fiber optic link, a microwave link, a combination of such links, or

any other suitable communications path. If it is desired to transmit video signals over link 16 in addition to data signals, a relatively high bandwidth link such as a satellite link is generally preferable to a relatively low bandwidth link such as a telephone line.

Television distribution facility 15 is a facility for distributing television signals to users. Television distribution facility 15 may be, for example, a cable system headend, a broadcast distribution facility, a satellite television distribution facility, or any other distribution facility.

The program guide information transmitted by main facility 12 to television distribution facility 15 includes television program listings data for current and future television programs. The television program listings data for each program preferably includes numerous program characteristics, e.g., the title of the program, the channel for the program, a scheduled broadcast time (start time) and an ending time (or duration). Other typical program characteristics include ratings, critics ratings, descriptions, themes (sports, movies, comedy, children, etc.), actors, etc. Transmitted program information may also include advertising information and pay program data such as pricing information for individual programs and subscription channels, time windows for ordering programs and channels, telephone numbers for placing orders that cannot be impulse ordered, etc.

Television distribution facility 15 distributes television programming and program guide

information to the user television equipment 20 or the user personal computer (PC) equipment 22 of multiple users via communications paths 24 and 26, respectively. For example, television programming may be distributed over analog television channels and program guide data may be distributed over an out-of-band channel on paths 24. Data distribution may also involve using one or more digital channels on paths 24 and 26. Such digital channels may also be used for distributing television programming and other information. Multiple television and audio channels (analog, digital, or both analog and digital) may be provided to set-top boxes 28 via communications paths 24. Program listings and other information may be distributed via communications path 26 to PC equipment 22. In addition, program listings and other data may also be distributed by one or more distribution facilities that are similar to but separate from television distribution facility 15 using communications paths that are separate from communications paths 24. If desired, data from the main facility 12 may be distributed to PC equipment 22 over the Internet or other suitable communications path that does not involve the use of television distribution facility 15.

The program guide may be implemented using a client-server architecture. In a client-server arrangement, the program guide is partially implemented on a server and partially implemented on a client. The server may be a server such as server 17 located at, for example, the television distribution facility 15, or alternatively, at the main facility 12. User equipment, e.g., set top box 28 or CPU 36, may act as

the client processor. Program guide data that are distributed to a client-server program guide at television distribution facility 15 may be stored in a database 18 at television distribution facility 15. For clarity, the present invention is sometimes described primarily in the context of program guides that are implemented on user equipment, rather than in the context of program guides that are implemented partially on a server and partially on user equipment.

Certain functions such as pay program purchasing may require set-top boxes 28 to transmit data to television distribution facility 15 over communications paths 24. If desired, such data may be transmitted over telephone lines or other separate communications paths. If functions such as these are provided using facilities separate from television distribution facility 15, some of the communications involving set-top boxes 28 may be made directly with the separate facilities.

User television equipment 20 has a receiver, which is typically a set-top box such as set-top box 28, but which may be other suitable television equipment into which circuitry similar to set-top-box circuitry has been integrated. Program guide data may be distributed to set-top boxes 28 periodically or continuously and stored in database 29. In a client-server architecture, this database need not be maintained on the set-top box. For example, the program guide may maintain a database such as database 18 on a server such as server 17 located at television distribution facility 15 or some other appropriate location or locations. Television distribution

facility 15 may poll set-top boxes 28 periodically for certain information (e.g., pay program account information or information regarding programs that have been purchased and viewed using locally-generated authorization techniques).

Main facility 12 preferably contains a processor to handle information distribution tasks. Each set-top box 28 preferably contains a processor to handle tasks associated with implementing a program guide application on the set-top box 28. Television distribution facility 15 may contain a processor for tasks associated with monitoring a user's interactions with the interactive program guide implemented on set-top boxes 28 and for handling tasks associated with the distribution of program guide data and other information to user television equipment 20. Moreover, the processor of television distribution facility 15 may implement the server functions of a client-server program guide.

Each set-top box 28 is typically connected to an optional videocassette recorder 30 so that selected television programs may be recorded. Each videocassette recorder 30 is connected to a television 32. To record a program, set-top box 28 tunes to a particular channel and sends control signals to videocassette recorder 30 (e.g., using an infrared transmitter) that direct videocassette recorder 30 to start and stop recording at the appropriate times.

During use of the interactive television program guide implemented on set-top box 28, television program listings and other information may be displayed on television 32. Such program guide displays may be

presented on top of a television program to which the user has tuned with set-top box 28 or may be presented in place of such a program. Each set-top box 28, videocassette recorder 30, and television 32 may be controlled by one or more remote controls 34 or any other suitable user input interface such as a wireless keyboard, mouse, trackball, dedicated set of buttons, etc. Remote controls such as remote control 34 have various buttons that may be pressed by the user such as cursor keys (for on-screen movement of a highlight region, scrolling functions, etc.), an OK or select or enter key (for making a selection), channel number keys (for selecting a television channel), a favorites key (to invoke functions related to user preferences), a delete key (to delete menu items or to express a disinterest in certain user preferences), etc.

PC equipment, such as PC equipment 22 having CPU 36, may be used with the interactive program guide. The program guide may be used to access and display the program guide information on the PC monitor 37. User selections and inputs may be made by a keyboard 38, mouse, trackball, or other PC input devices. It is understood that the following discussion, although directed to user television equipment and set top boxes, is applicable to program guides used in connection with PC equipment.

Modern cable and satellite systems provide users with a wide range of programming, of which only a portion may be of interest to a user at a particular time. In order to locate program listings of interest, program guides typically allow users to search through the listings by programming theme. Typical themes,

which are also sometimes called categories or genres, include, e.g., sports, children's programming, news, comedy, movies, etc. In accordance with the present invention, the program guide implemented on user television equipment 20 or PC equipment 22, allows users to designate certain themes as favorites in order to more efficiently search for programming that the user has an interest in. As described above, program listings data provides various program characteristics, such as program title, program theme (genre or category), etc. If the user has designated particular program themes as favorites, the favorite themes may be used to search for program listings of interest to the user. The program guide may also provide a list of themes in which the user's favorite themes appear at the top of the list.

The program guide provides various options that allow the user to specify favorite themes. Such options may be provided in the form of clickable menu items, drop-down lists, or any other suitable format. The user may select a desired menu item using a highlight region, cursor, arrow, or other suitable on-screen indicator that may be positioned over an option on the display (i.e., television 32). For example, a user may position a highlight region over a desired menu item and press OK on remote control 34 to complete the selection. Selections that involve entering characters may be made by selecting characters from characters displayed on the screen (e.g., using cursors to move through the alphabet) or by using a wireless keyboard or other alphanumeric entry device.

The process of selecting programming according to the invention is illustrated in FIG. 2. At step 39, the interactive program guide displays a list of available programming themes 101 (see, FIG. 3). At step 40, the user is provided with the option of modifying the list of themes in accordance with the user's viewing preferences. Typically, the user designates a favorite theme at this step, which indicates a generally high level of user interest. The themes list is modified based on that theme selection and level of interest. As will be described below, the themes list may be reordered to reflect the user's preference. Alternatively, particular themes in the themes list may be displayed in a distinctive manner to reflect the user's preference. At step 42, the user is provided with the option of designating a theme from the themes list as a search criterion for searching the program listings data. The user may select the favorite theme at this time or, alternatively, any other theme at step 42. At step 44, the user is provided with the option of viewing program listings which satisfy the selected search criteria.

Each of the above steps is independent of the preceding steps, such that the user may skip any of the steps during the process of selecting programming of interest. For example, the user may modify the themes list to the user's preference by designating favorites once at step 40. During subsequent viewings, the user may go directly to step 42 to select a theme from the themes list and skip step 40. During other viewings, the user may skip steps 40 and 42, and view programming listings at step 44. Moreover, steps 40 and 42 may be

combined such that the user may concurrently designate a favorite theme and select that theme as a search criteria. As will be described herein, the user may execute each of steps 40, 42, and 44 in separate, interactive screens. In some embodiments, the steps may be combined in a single screen.

According to a first embodiment of the invention, the step of modifying the themes list and the step of designating a theme as a search criterion are performed in interactive themes selection screen 100, represented in FIG. 3. This screen may be invoked by selecting an OK or select button on the user remote control 34 to select an appropriate menu option in the program guide. The themes available are identified and displayed in a themes list 101 (see, FIG.2, step 39). The themes may be listed alphabetically. Alternatively, the themes may be organized hierarchically with broader themes, such as "movies," "sports," etc. being further divided into more particular sub-themes "dramas" and "comedy," or "football" and "golf," respectively. Theme selection screen 100 permits the user to modify the themes list 101 (step 40) and to select a theme as a search criterion (step 42).

The step of modifying the themes list 101 is performed in the themes selection screen 100. More particularly, the user is able to designate a favorite theme and redisplay the themes list according to that favorite theme selection. By designating a favorite theme and reordering the themes list 101 accordingly, the themes list 101 becomes more useful in reflecting the user's viewing preferences. Modifying the themes

list includes step 46 in FIG. 4, wherein the user is given the option to select a theme, e.g., by highlighting it. At step 48, the user is given the option to designate the theme as a favorite theme, i.e., indicative of a generally high level of user interest. When the user designates a theme as a favorite, that theme is displayed at the top of the themes list at step 50. At step 52, each of the remaining themes is shifted down within the themes list 101 by one position in order to accommodate the favorite in the first position.

The user may proceed through steps 46-52 repeatedly to make several favorite theme designations. Each time a new favorite theme is designated, it is placed at the top of the list, and the previous favorite is displayed immediately beneath the current favorite. After repeated designations of favorite themes, the themes displayed near the top of the list will be the user's most recent favorites. Consequently, programming selection is simplified because the user is required to scan down only a portion of the list to view themes that reflect the user's current viewing preferences.

With continued reference to FIG. 3, the designation of the favorite may be performed by the user at themes selection screen 100. The themes list 101 may have more entries than may fit on the theme selection screen 100, and cursor buttons 104 may be used to scroll upward or downward on the list. The user may select the highlighted theme 102 with the cursor buttons 104 on the screen or the cursor keys on the user remote control. Once the desired theme has

been highlighted, it may be designated as a favorite by pressing the favorites button on the user remote control 34. Alternatively, the user may be provided with an option to directly type in a few letters of the theme rather than scroll through the entire list of themes with cursor buttons 104.

The reordered themes list 101 is shown at FIG. 5, with the favorite theme "sports" 102 at the top of the themes list. The remaining themes are moved down one position on the themes list to accommodate the favorite. The user is provided with the option of designating another favorite theme by highlighting that theme.

Modifying the themes list 101 to display favorite themes may be executed by the user infrequently, whereas the process of selecting particular themes and particular programming may be executed several times during each viewing session. Therefore, once the themes list has been modified to reflect the user's favorite themes, the process need not be repeated. The favorite themes are preferably stored in non-volatile memory, so that the display sequence will be remembered after power is cycled (step 53, FIG. 4).

Themes information for a particular theme may include a designation of a high or a low level of interest, a position or ranking on the themes list, or an associated color or display icon. This themes information, along with any other modifications to the themes list, may be stored as a component of a preference profile, which maintains information of a user, such as account numbers, premium channels, etc.

(see, for example, Ellis et al. U.S. patent application No. 09/034,934, filed March 4, 1998, which is hereby incorporated by reference herein in its entirety). As illustrated in FIG. 7, the program guide provides the user with the option at step 60 to create a preference profile. If there are multiple users, a separate preference profile may be maintained for each user. The program guide may therefore provide the user with the option of making one of the profiles active at step 62. During use of the program guide, each user may invoke that user's own profile, and the program guide would then display the themes list according to that user's theme preferences.

With continued reference to FIG. 3, the step of selecting a theme as a search criterion (step 42) may be performed by using cursor keys on the user remote control or cursor buttons 104 on screen 100 to highlight a particular theme 102, i.e., "sports". After the desired theme has been highlighted, the user presses select or OK on the user remote. Thus the theme "sports" has been selected as a search criterion for searching the program listings data for programming having the "sports" theme. As illustrated in FIG. 6, once a theme has been selected (step 54), the program guide searches the program listings data for any programming satisfying the search criterion (step 56). The search may be performed in database 29 by the user equipment 20 or 22 or in database 18 at television distribution facility 15 when a client-server architecture is used.

The user is provided the option of displaying the results of the search, i.e., the program listings

that have the selected theme (see FIG. 2, step 44). A list of programming that has the selected theme is displayed according to one embodiment in FIG. 8(a). The listing 110 of programming is a by-time listing displayed by broadcast time 112 and by channel 15. Only programming having the selected theme is displayed, whereas program listings which do not have the selected theme are suppressed from view. In the current example, only programming which has the theme "sports" is displayed. According to a second embodiment (FIG. 8(b)), listing 120 displays all available programming to the user by broadcast time 122 and by channel 124. Blocks 125 containing programming which has the desired theme is distinctively displayed to attract the user's attention. For example, each program may be represented in a particular color. In addition, an icon or label 126, e.g., "favorite" may be provided in the programming block 125. Continuing with the example, all programming is displayed, but only programming having the "sports" theme is specially highlighted or displayed. The user may remain in the program listings mode (step 44) and make programming selections within this mode, as is known in the art. For example, the user may highlight a particular program to make a selection. While viewing listing 120, the user may quickly move the highlighted region between programs having the selected "favorite" theme and skip over all other programming. In one embodiment, by pressing a "FAV" key on the user remote 34, the viewer may advance the highlighted region from "NBA Basketball" on channel 6 directly to "College Football" on channel 9, while skipping channels 7-8.

Alternatively, the user may be chose the option to select another theme (step 42), or to modify the themes list by designating another favorite (step 40).

According to a second embodiment, the step of modifying the themes list may also provide the user with the option of selecting a theme which is not a favorite, i.e., a theme for which the user has a generally low level of interest. Therefore, the display of that type of theme on the themes list 101 may distract the user from selecting programming of interest. Consequently, designating the theme as a non-favorite modifies the themes list so that a particular non-favorite theme is less prominently displayed or deleted from view.

As illustrated in FIG. 9, the user is given the options of selecting a theme at step 66, and designating the theme as a favorite (step 68). The second embodiment according to the invention also provides the option at step 74 to select a theme as a non-favorite, i.e., indicating that the user has a generally low level of interest. As with steps 48-52, above, for designating favorite themes, the designation of non-favorite themes at step 74 may be performed repeatedly.

The user is subsequently provided with the option of selecting how the themes list will be modified by the designation of the non-favorite theme at step 74. Alternatively, the themes list may be modified according to a default setting, as will be described in greater detail below. In an exemplary default setting, the option may only be provided to the user during an initial set-up procedure, if at all.

According to a first option (step 76), the non-favorite theme is displayed at the bottom of the themes list. Consequently, the user will not view that particular theme in the themes list during casual searching, unless the user chooses to scroll to the bottom of the list. (The remainder of the themes are reordered at step 72, as described above for favorites at step 70.)

Alternatively, at step 78, the user is given the option of deleting that theme from display on the themes list 101. For example, the user may have no interest in horror movies. Thus, the user may chose to remove the theme "horror" from the themes list 101. The theme which has been selected at step 66, and designated as a non-favorite at step 74, is deleted from the themes list at step 78. The deletion of a theme at step 78 is useful when there is expected to be so little interest in a particular theme that the user does not wish to be given the option of selecting programming having that theme.

As described above, the user preferences with respect to the themes and level of interest, i.e., "favorite" or "non-favorite" designation, are preferably stored in the non-volatile memory at step 79 so that information is not lost when the set-top box is shut down and restarted.

It is contemplated that the user's preferences may change, or that a plurality of users may have access to the program guide. Thus, at step 80 (FIG. 10), the user is given the option of retaining the deleted themes in the non-volatile memory. At step 82, the user may be provided with the option to restore the deleted themes to the themes list 101. The

restoration process may global, such that all deleted themes are returned to the themes list 101. Alternatively, the restoration process of step 82 may be selective, wherein the user may view the deleted themes and restore individual themes to the themes list 101. It is contemplated that steps 80 and 82 may require the entry of personal identification code or other access code.

With continued reference to FIG. 3, selection of a non-favorite theme may be done by highlighting the theme 102 and then pressing the delete button on the user remote control 34. The program guide may have been programmed with a default option wherein the non-favorite theme is placed at the bottom of the themes list (see, FIG. 7, step 76). Alternatively, the default option may be to delete the selected theme from the themes list (step 78). According to yet another alternative, as shown in FIG. 10, the user may be prompted to select one of the two options when a theme is designated as a non-favorite. Accordingly, when a theme is highlighted and delete is selected, a window 124 is displayed to confirm the user's selection. The user is notified that the selection has been designated a non-favorite. In addition, the user is given the option of selecting option 126 to place the theme at the bottom of the list or option 128 to delete the theme from the themes list. The user may then select OK at option 132 to confirm the selection or CANCEL at option 134 to discontinue the selection.

According to a third embodiment, the step of modifying the themes list by designating a favorite theme and reordering the themes list 101 (step 40) is

accomplished with a first interactive screen 200 (FIG. 12). In contrast with the previous embodiments, the step of selecting a theme as a search criterion is accomplished in a separate, second interactive theme selection screen, such as screen 100 (FIG. 3).

As illustrated in FIG. 12, when screen 200 is invoked, the user is provided with a list of themes 201, and cursor buttons 204. In addition, FAV on-screen button 210 permits the user to designate favorite themes, and a DELETE on-screen button 212 permits the user to designate non-favorite themes. The user selects the particular theme, i.e., "sports" 202, from the themes list, for example by scrolling up and down the list with the arrow keys on the user remote or by highlighting and selecting the up and down-cursor buttons 204 on screen 200. The user then selects the theme by pressing select or OK on the user remote. When a theme is selected, it may be displayed in a "highlighted format," e.g., by shading or an outline surrounding the block for theme 202.

The user is then provided the option of designating the selected theme as a favorite (step 68) or designating the selected theme as a non-favorite (step 74). To designate the selected theme as a favorite, the user may press the Favorites key on the user remote, as above. Alternatively, the user may highlight and select the FAV on-screen button 210. By designating a favorite, the themes list is modified as described above, i.e., the selected favorite is placed at the top of the themes list and the remaining themes are moved down by one position to accommodate the new favorite. To designate a non-favorite, the user

presses the delete key on the user remote or highlights and selects the DELETE on-screen button 212. As described above, the user may select the option wherein the non-favorite theme is placed at the bottom of the themes list or alternatively is deleted from the themes list entirely. After modifying the themes list at screen 200, the user would be prompted to go to screen 100 to select a theme as a search criterion.

In an alternative embodiment, the user may be provided the option of modifying the display of themes with greater precision than described above. As illustrated in FIG. 13, after selecting a theme at step 80, the user is given the option at step 82 of selecting the position of a theme on the themes list. For example, the user may wish to place the theme in the second position, rather than at the top of the list. The themes list 101 displays the themes according to the selected order (step 84). Typically, a numerical ranking is associated with each theme. This numerical ranking may be displayed on the screen with the themes list, or it may be suppressed from the visual presentation, if desired.

According to this embodiment, the favorite theme designation screen 300 (FIG. 14) provides the user with the option of providing a numerical position for the theme in the themes list 301. Upon selecting this option, the numerical position 303 of each theme in the themes list may be displayed. The user may highlight a particular theme using cursor buttons 304. The highlighted theme 302 is provided with a window 306 having a plurality of selection buttons 308 for changing the theme's position in the theme list. The

selection window 306 provides the user with the option of directly inputting the numerical rank or position for that theme in the themes list. The remote control 34 may be provided with a numerical keypad. Alternatively, the user may be prompted to use cursor keys 308 to select a numerical position for the particular theme. It is understood that the various selection screens and keystrokes are merely illustrative of the invention.

In another alternative embodiment, the user is provided with the option of displaying favorite themes in a distinctive color in order to assist the user in quickly identifying favorite themes. Moreover, this embodiment allows the user to designate several themes as favorites and search the program listings for programming having at least one of the several themes. At step 86, the user is provided with the option of selecting a theme, and at step 88 the user is provided the option of designating the theme as a favorite (FIG. 15). At step 90, the favorite theme is redisplayed on the themes list in color.

Theme selection screen 400 permits both the step of modifying the themes list (step 40) by designating and highlighting favorite themes and the step of designating the themes as search criteria (step 42). The user is provided with the option of selecting a theme by using the cursor keys to scroll to the desired theme (FIG. 16). The user designates the highlighted theme as a favorite by pressing the Favorites button on the user remote or by highlighting and selecting the FAV on-screen button 410. In contrast with the embodiments described above, the

designated favorite theme does not change location on the themes lit but is represented in a particular color. The user may be prompted to select a color, or a default color may be selected by the program guide to assign to all selected favorite themes. This process of designating themes may be repeated as many times as desired. The modified themes list continues to display all themes during this process. However, themes designated as favorites would be displayed in the selected color, and themes that the user has not selected will continue to be represented in a neutral color, such as white or black. In FIG. 16, for example, the user has designated "comedy," "sports," and "drama" as favorite themes.

Once the favorite themes have been designated, theme selection screen 400 permits the user to use the designated favorites as search criteria. By pressing select or OK on the user remote, the program guide performs a search in the program listings data wherein the selected themes would serve as search criteria for any programming having at least one of the designated favorite themes.

The user is then able to display a list of programming which includes any of the themes which have been selected. Such a display may be similar to program listing 110 (FIG. 8(a)), or program listing 120 (FIG. 8(b)). As described above, the user preferences with respect to the themes are preferably **stored** in the non-volatile memory so that information is not lost when the set-top box is shut down and restarted.

In yet another alternative embodiment, screen 500 is invoked, as illustrated in FIG. 17. Screen 500

is similar to screen 200, described above, in providing the option of modifying the themes list (step 40, FIG. 2). Likewise, the option of selecting a theme as a search criterion (step 42) is provided in a separate interactive screen. Screen 500 provides the user with a complete list of themes 501, and FAV on-screen buttons 510 that permit the user to designate several favorite themes. The user selects a theme, such as "sports" 502, from the themes list substantially as described above, for example, by scrolling up and down the list with the arrow keys on the user remote or by highlighting and selecting the up and down-cursor buttons 504 on screen 500. (In the exemplary embodiment, the selected theme is illustrated in a highlighted format, e.g., by the dark line surrounding block 502.) The user may designate the selected theme as a favorite by pressing Favorite on the user remote, or highlighting and selecting the FAV button 510 on screen 500. Each time a theme is selected and designated a favorite, it may be distinctively displayed, for example, in a predetermined color (as illustrated by the shading in the FIG.) or accompanied by an icon or label to indicate its status as a favorite. As with the embodiment described with respect to FIG. 16, the process of designating favorite themes may be repeated as many times as desired. In FIG. 17, the theme "comedy" 503 has also been selected as a favorite theme and is displayed in a predetermined color. The modified themes list continues to display the complete list of themes on screen 500, with favorite themes distinctively displayed as described

above. The user may exit screen 500 by pressing select or OK on the user remote.

Screen 550, as illustrated in FIG. 18, may be displayed after the user has designated at least one favorite theme in screen 500. Screen 550 may also be reached from other interactive screens described above. Screen 550 displays a partial themes list 551, which is substantially similar to themes list 101 described above. However, themes list 551 is modified to display themes designated as favorites. Continuing with the above example, themes "comedy" and "sports" were selected as favorites in screen 500. All other themes not previously selected may be deleted or suppressed from view. The selection of programming is thereby simplified for the user by the display of favorite themes only. From screen 550, a theme may be selected as a search criterion by highlighting the theme and pressing select or OK on the user remote. As described with respect to FIG. 6, once a theme has been selected (step 54), the program guide searches the program listings data for any programming satisfying the search criterion (step 56). The results of the search may be displayed as in FIG. 8(a) or 8(b), described above, or other similar format.

The user's preferences with respect to favorite themes may change over time. The user may wish to change the selection of favorite themes that are displayed at screen 550. At step 80 (FIG. 10), the user is provided with the option of retaining in memory the themes which were not selected at screen 500 and deleted from themes list 551. This process may alternatively be a default setting, such that the

option is provided to the user during a set-up procedure, if at all. At step 82, the user may be provided with the option of restoring deleted themes to the themes list at screen 500.

The foregoing is merely illustrative of the principles of this invention and various modifications can be made by those skilled in the art without departing from the scope and spirit of the invention.

What is Claimed is:

1. An interactive television program guide system in which an interactive television program guide is at least partially implemented on user equipment of a user, comprising:

means for displaying a list of programming themes;

means for providing an option with the interactive television program guide for the user to select a programming theme from the list of programming themes and a level of interest in that programming theme which is indicative of the user's programming interests; and

means for modifying the list of programming themes based upon the selected theme and level of interest.

2. The interactive television program guide system defined in claim 1, wherein the means for providing the option for the user to select a programming theme and a level of interest in that programming theme comprises providing an option for the user to designate a high level of interest in the selected programming theme.

3. The interactive television program guide system defined in claim 2, wherein the means for modifying the list of programming themes comprises means for displaying the list of programming themes with the selected programming theme at the top of the list.

4. The interactive television program guide system defined in claim 3, wherein the means for displaying the list of programming themes further comprises means for shifting the remaining programming themes to a lower position on the list.

5. The interactive television program guide system defined in claim 1, further comprising:

means for providing an option to select a programming theme from the list as a search criterion for searching program listings data.

6. The interactive television program guide system defined in claim 5, further comprising:

means for searching the program listings data for programming satisfying the search criterion in a database maintained by the interactive television program guide.

7. The interactive television program guide system defined in claim 6, wherein the interactive television program guide maintains the database on the user equipment.

8. The interactive television program guide system defined in claim 6, further comprising:

a server located at a television distribution facility on which at least a portion of the interactive television program guide is implemented, wherein the interactive television program guide maintains the database on the server.

9. The interactive television program guide system defined in claim 6, further comprising:

means for displaying a list of programming satisfying the search criterion.

10. The interactive television program guide system defined in claim 1, wherein the means for providing the option for the user to select a programming theme and a level of interest in that programming theme comprises providing an option to designate a low level of interest in the selected programming theme.

11. The interactive television program guide system defined in claim 10, wherein the means for modifying the list of programming themes comprises means for displaying the list of programming themes with the selected programming theme at the bottom of the list.

12. The interactive television program guide system defined in claim 10, wherein the means for modifying the list of programming themes comprises means for deleting the selected programming theme from the list of programming themes.

13. The interactive television program guide system defined in claim 1, wherein the means for providing an option for the user to select a programming theme and a level of interest in that programming theme comprises means for numerically

designating a position for the selected programming theme in the list of programming themes.

14. The interactive television program guide system defined in claim 1, wherein the means for modifying the list of programming themes comprises means for displaying the selected programming theme in a predetermined color.

15. The interactive television program guide system defined in claim 14, further comprising:

means for searching program listings data stored in a database maintained by the interactive television program guide while using the selected programming theme as a search criterion.

16. The interactive television program guide system defined in claim 15, wherein the interactive television program guide maintains the database on the user equipment.

17. The interactive television program guide system defined in claim 15, further comprising:

a server located at a television distribution facility on which at least a portion of the interactive television program guide is implemented, wherein the interactive television program guide maintains the database on the server.

18. The interactive television program guide defined in claim 15, further comprising:

means for displaying a list of programming satisfying the search criterion.

19. The interactive television program guide system defined in claim 1, further comprising:

means for storing the selected programming theme and level of interest.

20. The interactive television program guide system defined in claim 1, wherein the user equipment is user personal computer equipment.

21. The interactive television program guide system defined in claim 1, wherein the user equipment is user television equipment.

22. The interactive television program guide system defined in claim 1, further comprising:

a server located at a television distribution facility on which at least a portion of the interactive television program guide is implemented.

23. An interactive television program guide system in which an interactive television program guide is implemented on user equipment of a user, comprising:

means for providing an option with the interactive television program guide for the user to select a favorite programming theme from a list of programming themes; and

means for displaying the list of programming themes in which the favorite programming theme is reordered at the top of the list.

24. The interactive television program guide system defined in claim 23, wherein the means for displaying the list of programming themes further comprises means for shifting the remaining programming themes in the list to a lower position on the list.

25. The interactive television program guide system defined in claim 23, further comprising:

means for providing an option to select a programming theme from the list as a search criterion; and

means for searching programming listings data for programming satisfying the search criterion.

26. The interactive television program guide system defined in claim 25, further comprising:

means for displaying a list of programming satisfying the search criterion.

27. The interactive television program guide system defined in claim 23, further comprising:

means for storing the favorite programming theme in a non-volatile memory device.

28. The interactive television program guide system defined in claim 23, wherein the user equipment is personal computer equipment.

29. The interactive television program guide system defined in claim 23, wherein the user equipment is user television equipment.

30. An interactive television program guide system in which an interactive television program guide is implemented on user equipment of a user, comprising:

means for providing an option with the interactive television program guide for the user to select a programming theme for which the user has a low level of interest from a list of programming themes; and

means for providing an option for displaying the list of programming themes having the selected programming theme at the bottom of the list of programming themes.

31. The interactive television program guide system defined in claim 30, further comprising:

means for providing an option for deleting the selected programming theme from the list of programming themes.

32. The interactive program guide system defined in claim 31, further comprising:

means for providing an option for restoring the deleted programming theme to the themes list.

33. The interactive television program guide system defined in claim 30, further comprising:

means for storing the selected programming theme in a non-volatile memory device.

34. The interactive television program guide system defined in claim 30, wherein the user equipment is personal computer equipment.

35. The interactive television program guide system defined in claim 30, wherein the user equipment is user television equipment.

36. An interactive television program guide system in which an interactive television program guide is implemented on user equipment of a user, comprising:

means for displaying a list of programming themes;

means for providing an option with the interactive television program guide for the user to select a plurality of favorite programming themes from the list of programming themes; and

means for displaying the list of programming themes in which the selected favorite programming themes are distinctively displayed.

37. The interactive television program guide system defined in claim 36, wherein the means for displaying the list of programming themes comprises highlighting the favorite programming theme in a predetermined color.

38. The interactive television program guide system defined in claim 36, further comprising:

means for searching programming listings data for programming having at least one of the selected programming themes.

39. The interactive television program guide system defined in claim 37, further comprising:

means for displaying a list of programming having at least one of the selected programming themes.

40. The interactive television program guide system defined in claim 36, further comprising:

means for storing the favorite programming themes in a non-volatile memory device.

41. The interactive television program guide system defined in claim 36, wherein the user equipment is personal computer equipment.

42. The interactive television program guide system defined in claim 36, wherein the user equipment is user television equipment.

43. An interactive television program guide system in which an interactive program guide is at least partially implemented on user equipment of a user, comprising:

means for displaying a list of programming themes;

means for providing an option with the interactive television program guide for the user to select a programming theme from the list of programming

themes and a level of interest in that programming theme which is indicative of the user's programming interest; and

means for providing an option for creating a preference profile with which the selected programming theme and level of interest are associated.

44. The interactive television program guide system defined in claim 43, wherein there are multiple profiles, the system further comprising means for providing an option of selecting which of the profiles to make active.

45. The interactive television program guide system defined in claim 43, further comprising:

means for modifying the list of programming themes based upon the selected programming theme and level of interest.

46. The interactive television program guide system defined in claim 43, wherein the means for providing an option for the user to select a programming theme and a level of interest in that programming theme comprises providing an option for the user to designate a high level of interest in the selected programming theme.

47. The interactive television program guide system defined in claim 44, wherein the means for modifying the list of programming themes comprises means for displaying the list of programming themes

with the selected programming theme at the top of the list.

48. The interactive television program guide system defined in claim 45, wherein the means for displaying the list of programming themes further comprises means for shifting the remaining programming themes to a lower position on the list.

49. The interactive television program guide system defined in claim 43, further comprising:

means for providing an option to select a programming theme from the list as a search criterion for searching program listings data.

50. The interactive television program guide system defined in claim 47, further comprising:

means for searching the program listings data for programming satisfying the search criterion in a database maintained by the interactive television program guide.

51. The interactive television program guide system defined in claim 48, wherein the interactive television program guide maintains the database on the user equipment.

52. The interactive television program guide system defined in claim 48, further comprising:

a server located at a television distribution facility on which at least a portion of the interactive television program guide is

implemented, wherein the interactive television program guide maintains the database on the server.

53. The interactive television program guide system defined in claim 48, further comprising:

means for displaying a list of programming satisfying the search criterion.

54. The interactive television program guide system defined in claim 43, wherein the means for providing an option for the user to select a programming theme and a level of interest in that programming theme comprises providing an option to designate a low level of interest in the selected programming theme.

55. The interactive television program guide system defined in claim 52, wherein the means for modifying the list of programming themes comprises displaying the list of programming themes with the selected programming theme at the bottom of the list.

56. The interactive television program guide system defined in claim 52, wherein the means for modifying the list of programming themes comprises means for deleting the selected programming theme from the list of programming themes.

57. The interactive television program guide system defined in claim 43, wherein the means for providing an option for the user to select a programming theme and a level of interest in that

programming theme comprises means for numerically designating a position for the selected programming theme in the list of programming themes.

58. The interactive television program guide system defined in claim 43, wherein the means for modifying the list of programming themes comprises means for displaying the selected programming theme in a predetermined color.

59. The interactive television program guide system defined in claim 56, further comprising:

means for searching program listings data stored in a database maintained by the interactive television program guide while using the selected programming theme as a search criterion.

60. The interactive television program guide system defined in claim 57, wherein the interactive television program guide maintains the database on the user equipment.

61. The interactive television program guide system defined in claim 57, further comprising:

a server located at a television distribution facility on which at least a portion of the interactive television program guide is implemented, wherein the interactive television program guide maintains the database on the server.

62. The interactive television program guide defined in claim 57, further comprising:

means for displaying a list of programming satisfying the search criterion.

63. The interactive television program guide system defined in claim 43, further comprising:

means for storing the selected programming theme and level of interest.

64. The interactive television program guide system defined in claim 43, wherein the user equipment is user personal computer equipment.

65. The interactive television program guide system defined in claim 43, wherein the user equipment is user television equipment.

66. The interactive television program guide system defined in claim 43, further comprising:

a server located at a television distribution facility on which at least a portion of the interactive television program guide is implemented.

67. An interactive television program guide system in which an interactive television program guide is at least partially implemented on user equipment of a user, comprising:

means for displaying a first list of programming themes;

means for providing an option with the interactive television program guide for the user to select a programming theme from the list of programming themes and a level of interest in that programming theme which is indicative of the user's programming interests; and

means for displaying a second list of programming themes based upon the selected programming theme and level of interest.

68. The interactive television program guide system defined in claim 67, wherein the second list of programming themes displays only the selected programming themes.

69. The interactive television program guide system defined in claim 67, wherein the means for providing an option for the user to select a programming theme and a level of interest in that programming theme comprises means for providing an option for the user to designate a high level of interest in the selected programming theme.

70. The interactive television program guide system defined in claim 67, further comprising:

means for providing an option to select a programming theme from the second list as a search criterion for searching program listings data.

71. The interactive television program guide system defined in claim 70, further comprising:

means for searching the program listings data for programming satisfying the search criterion in a database maintained by the interactive television program guide.

72. The interactive television program guide system defined in claim 71, wherein the interactive television program guide maintains the database on the user equipment.

73. The interactive television program guide system defined in claim 71, further comprising:

a server located at a television distribution facility on which at least a portion of the interactive television program guide is implemented, wherein the interactive television program guide maintains the database on the server.

74. The interactive television program guide system defined in claim 71, further comprising:

means for displaying a list of programming satisfying the search criterion.

75. The interactive television program guide system defined in claim 67, further comprising:

means for storing the selected programming theme and level of interest.

76. The interactive television program guide system defined in claim 67, wherein the user equipment is user personal computer equipment.

77. The interactive television program guide system defined in claim 67, wherein the user equipment is user television equipment.

78. A method for using an interactive television program guide system in which an interactive television program guide is at least partially implemented on user equipment of a user, comprising:

displaying a list of programming themes;

providing an option with the interactive program guide system for the user to select a programming theme from the list of programming themes and a level of interest in that programming theme which is indicative of the user's programming interests; and

modifying the list of programming themes based on the selected programming theme and level of interest.

79. The method defined in claim 78 wherein the step of providing an option for the user to select a programming theme from the list of programming themes and a level of interest in that programming theme comprises designating a high level of interest in the selected programming theme.

80. The method defined in claim 79 wherein the step of modifying the list of programming themes comprises reordering the favorite programming theme at the top of the list of programming themes.

81. The method defined in claim 80 wherein the step of modifying the list of programming themes

further comprises shifting the remaining programming themes to a lower position on the list.

82. The method defined in claim 79, further comprising:

providing an option to select a programming theme from the list as a search criterion for searching program listings data.

83. The method defined in claim 82, further comprising:

searching the program listings data for programming satisfying the search criterion in a database maintained by the interactive television program guide.

84. The method defined in claim 83, further comprising:

maintaining the database on user equipment.

85. The method defined in claim 83, further comprising:

providing a server located at a television distribution facility on which at least a portion of the interactive television program guide is implemented; and

maintaining the database on the server.

86. The method defined in claim 83, further comprising:

displaying a list of programming satisfying the search criterion.

87. The method defined in claim 78, wherein the step of providing an option for the user to select a programming theme and a level of interest in that programming theme comprises providing an option to designate a low level of interest in the selected programming theme.

88. The method defined in claim 87, wherein the step of modifying the list of programming themes comprises displaying the list of programming themes with the selected programming theme at the bottom of the list.

89. The method defined in claim 87, wherein the step of modifying the list of programming themes comprises deleting the selected programming theme from the list of programming themes.

90. The method defined in claim 78, wherein the means for providing an option for the user to select a programming theme and a level of interest in that programming theme comprises numerically designating the position of the selected programming theme in the list of programming themes.

91. The method defined in claim 78, wherein the means for modifying the list of programming themes

comprises means for displaying the selected programming theme in a predetermined color.

92. The method defined in claim 91, further comprising:

searching program listings data stored in a database maintained by the interactive television program guide while using the selected programming theme as a search criterion.

93. The method defined in claim 92, further comprising:

maintaining the database on the user equipment.

94. The method defined in claim 92, further comprising:

providing a server located at a television distribution facility on which at least a portion of the interactive television program guide is implemented,; and

maintaining the database on the server.

95. The method defined in claim 92, further comprising:

displaying a list of programming satisfying the search criterion.

96. The method defined in claim 78, further comprising:

storing the selected programming theme and level of interest.

97. The method defined in claim 78, further comprising:

providing a server located at a television distribution facility; and

implementing at least a portion of the interactive television program guide on the server.

98. The method defined in claim 78, wherein the step of providing an option for the user to select a programming theme from the list of programming themes and a level of interest in that programming theme comprises designating a plurality of favorite programming themes from the list of programming themes.

99. The interactive television program guide system defined in claim 98, wherein the step of modifying the list of programming themes comprises highlighting the favorite programming theme in a predetermined color.

100. The method defined in claim 98, further comprising:

searching programming listings data for programming having at least one of the selected programming themes.

101. The method defined in claim 100, further comprising:

displaying a list of programming having at least one of the selected programming themes.

102. The method defined in claim 78, further comprising:

providing an option for creating a preference profile with which the selected programming theme and the respective level of interest are associated.

103. The method defined in claim 102, wherein there are multiple profiles, the method further comprising:

providing an option of selecting which of the profiles to make active.

104. A method for using an interactive television program guide system in which an interactive television program guide is at least partially implemented on user equipment of a user, comprising:

displaying a first list of programming themes;

providing an option with the interactive television program guide for the user to select a programming theme from the list of programming themes and a level of interest in that programming theme which is indicative of the user's programming interests; and

displaying a second list of programming themes based upon the selected programming theme and level of interest.

105. The method defined in claim 104, wherein the step of displaying a second list of programming themes comprises displaying only the selected programming themes.

106. The method defined in claim 104, wherein the means for providing an option for the user to select a programming theme and a level of interest in that programming theme comprises providing an option for the user to designate a high level of interest in the selected programming theme.

107. The method defined in claim 104, further comprising:

providing an option to select a programming theme from the second list as a search criterion for searching program listings data.

108. The method defined in claim 107, further comprising:

searching the program listings data for programming satisfying the search criterion in a database maintained by the interactive television program guide.

109. The method defined in claim 108, further comprising:

maintaining the database on the user equipment.

110. The method defined in claim 108, further comprising:

a server located at a television distribution facility on which at least a portion of the interactive television program guide is implemented, wherein the interactive television program guide maintains the database on the server.

111. The method defined in claim 108, further comprising:

displaying a list of programming satisfying the search criterion.

112. The method defined in claim 104, further comprising:

storing the selected programming theme and level of interest.

113. The method defined in claim 104 further comprising:

providing a server located at a television distribution facility; and

implementing at least a portion of the interactive television program guide on the server.

Abstract of the Disclosure

An interactive television program guide system is provided in which a user may inform a program guide of the user's interests. The interactive program guide system displays a list of available programming themes. The user may select a programming theme from the available programming themes and designate a level of interest in that theme. The user may designate, e.g., a high level of interest, i.e., a "favorite," or a low level of interest in the theme. The programming guide will modify a list of themes according to the selected theme and level of user interest. The user is thus able to view the themes list and quickly identify programs of interest by the location of the selected theme in the themes list, or by a distinctive display of the selected theme.

EH623270254US

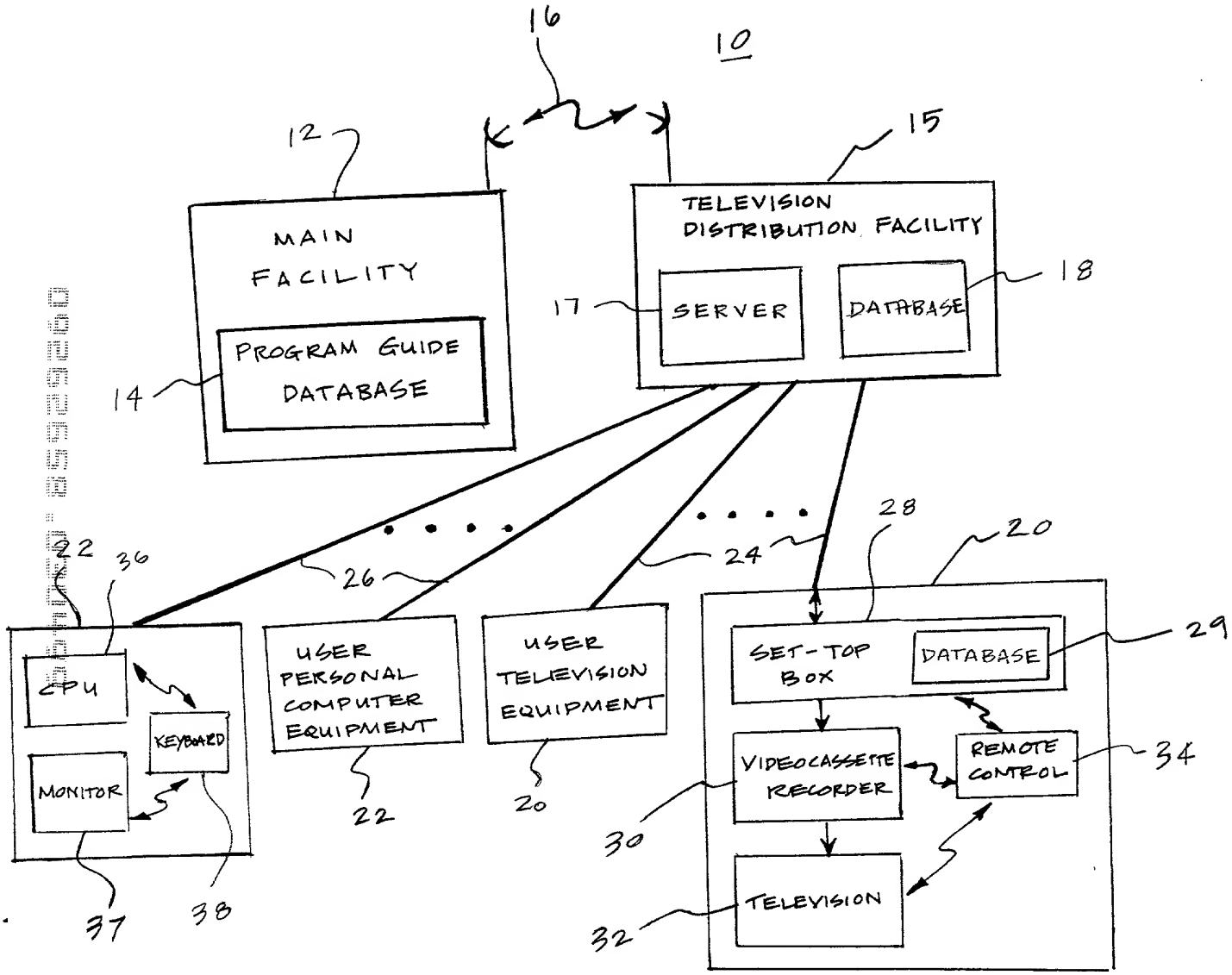

FIG. 1

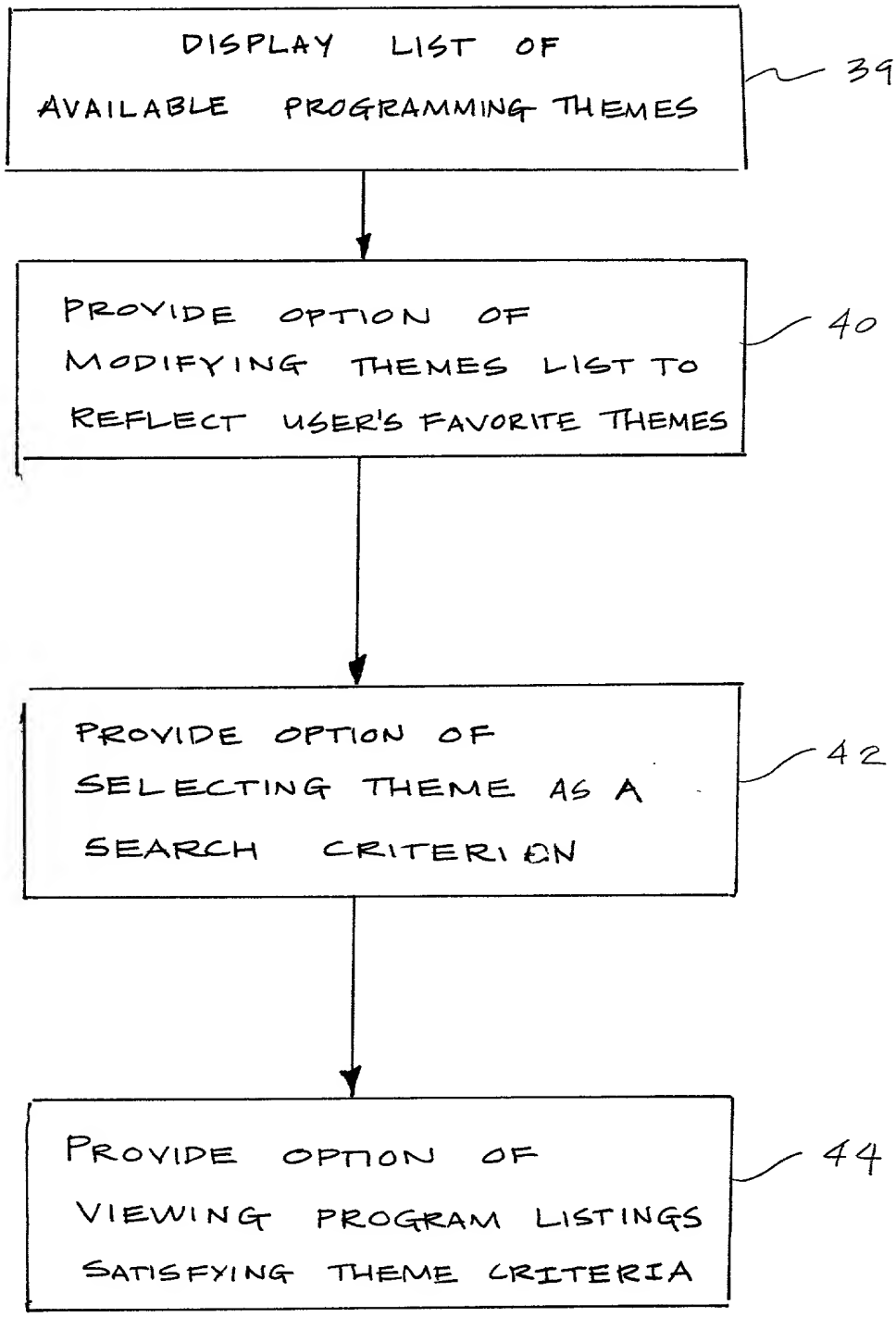
DISPLAY LIST OF AVAILABLE PROGRAMMING THEMES
39
PROVIDE OPTION OF MODIFYING THEMES LIST TO REFLECT USER'S FAVORITE THEMES
40
PROVIDE OPTION OF SELECTING THEME AS A SEARCH CRITERION
42
PROVIDE OPTION OF VIEWING PROGRAM LISTINGS SATISFYING THEME CRITERIA
44

FIG. 2

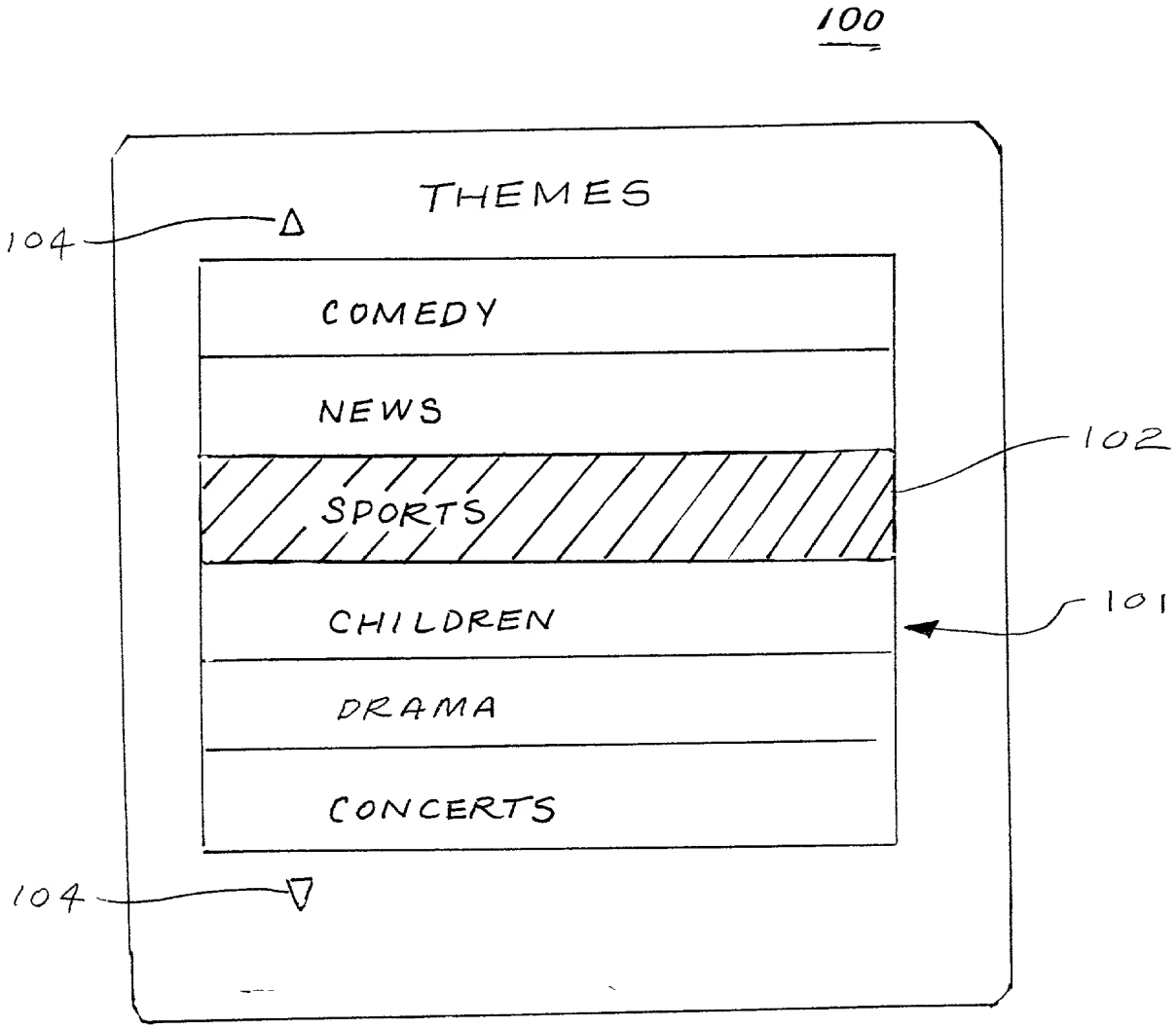
100
THEMES
104
COMEDY
NEWS
SPORTS
CHILDREN
DRAMA
CONCERTS
102
101
104

FIG. 3

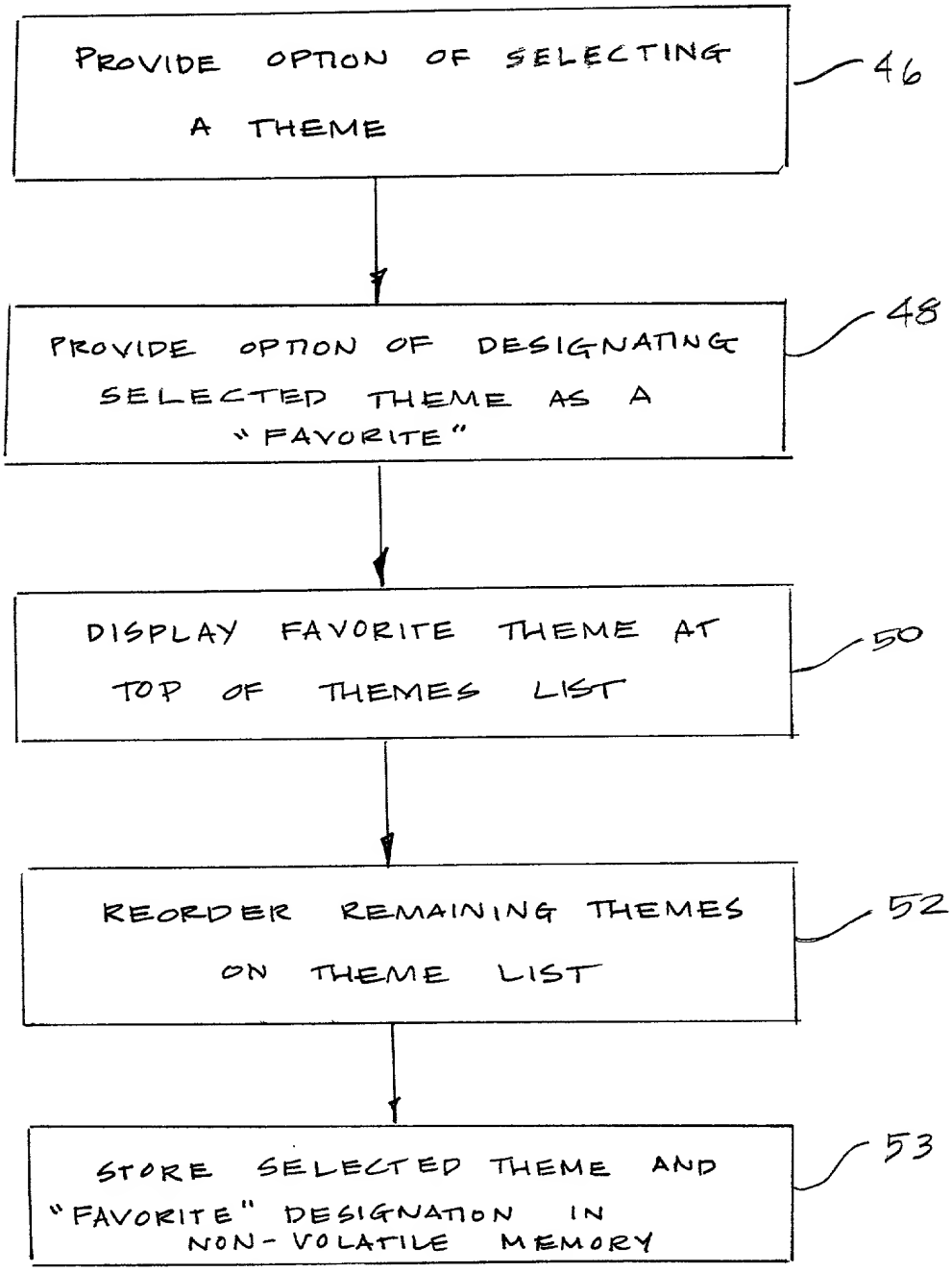
PROVIDE OPTION OF SELECTING A THEME
46
PROVIDE OPTION OF DESIGNATING SELECTED THEME AS A "FAVORITE"
48
DISPLAY FAVORITE THEME AT TOP OF THEMES LIST
50
REORDER REMAINING THEMES ON THEME LIST
52
STORE SELECTED THEME AND "FAVORITE" DESIGNATION IN NON-VOLATILE MEMORY
53

FIG. 4

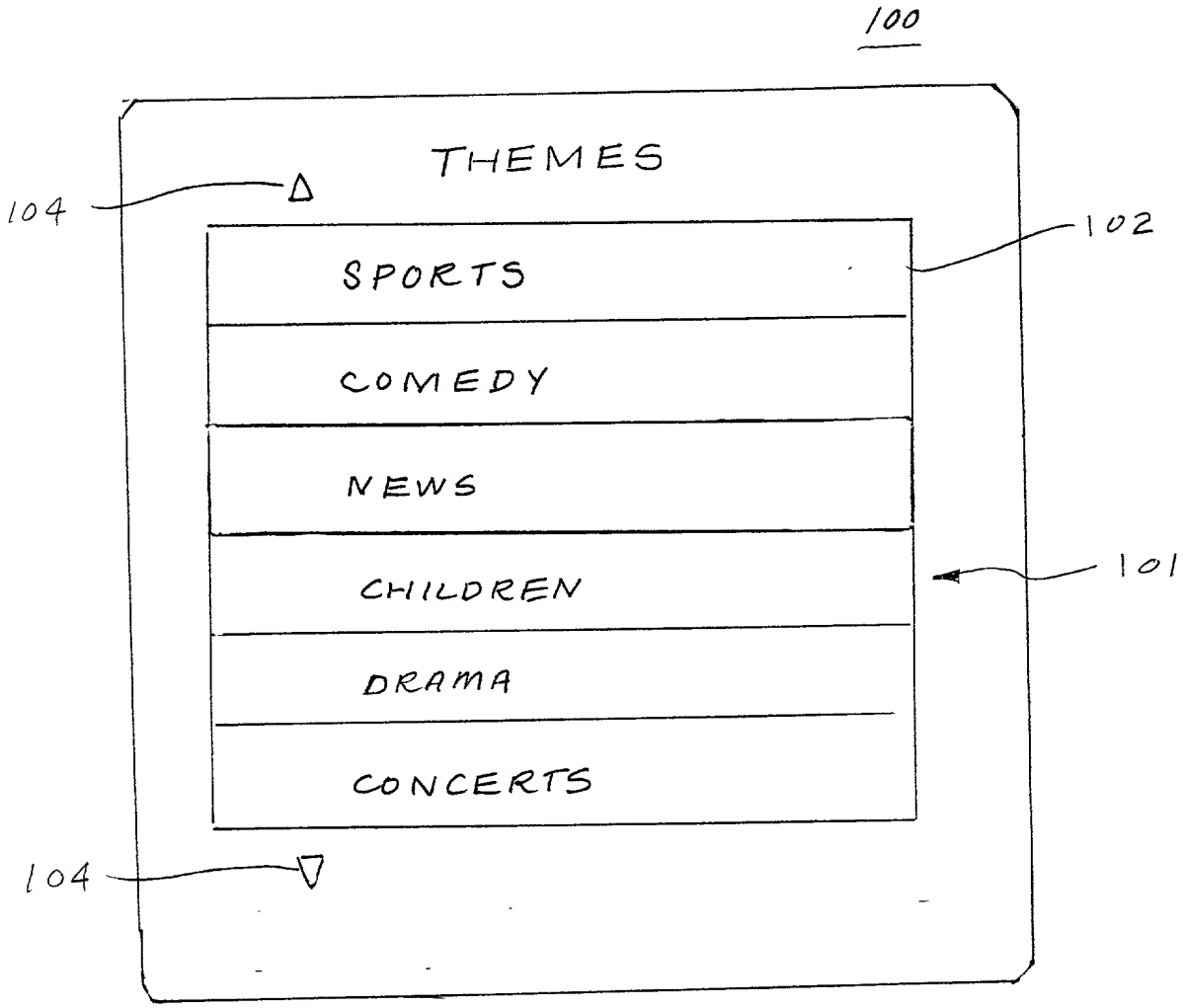
100
THEMES
104
SPORTS
COMEDY
NEWS
CHILDREN
DRAMA
CONCERTS
102
101
104

FIG. 5

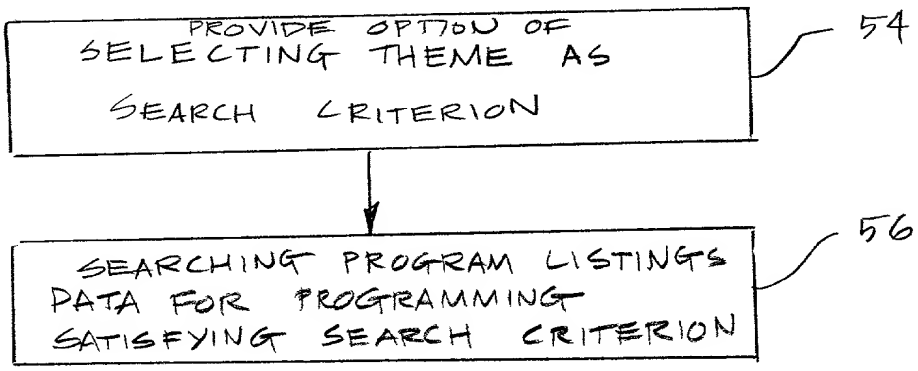
PROVIDE OPTION OF SELECTING THEME AS SEARCH CRITERION
54
SEARCHING PROGRAM LISTINGS DATA FOR PROGRAMMING SATISFYING SEARCH CRITERION
56

FIG. 6

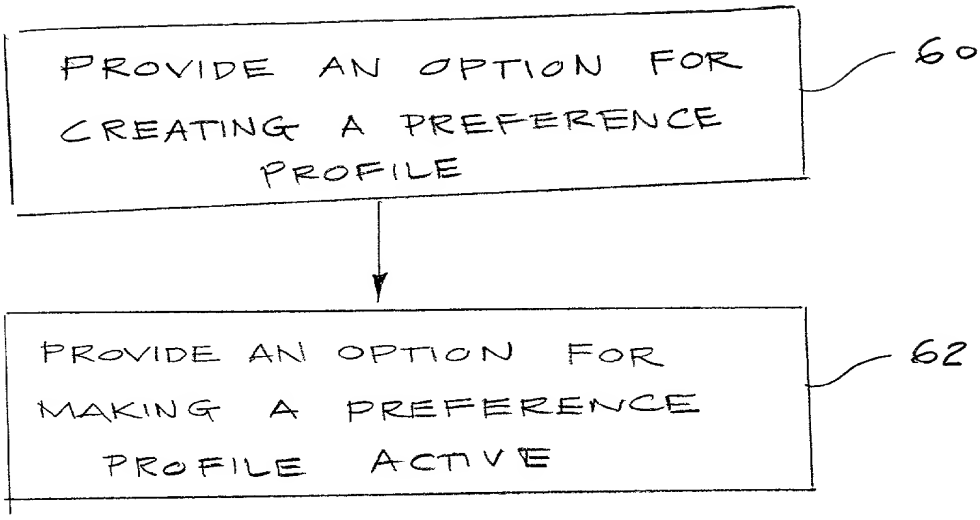
PROVIDE AN OPTION FOR CREATING A PREFERENCE PROFILE
60
PROVIDE AN OPTION FOR MAKING A PREFERENCE PROFILE ACTIVE
62

FIG. 7

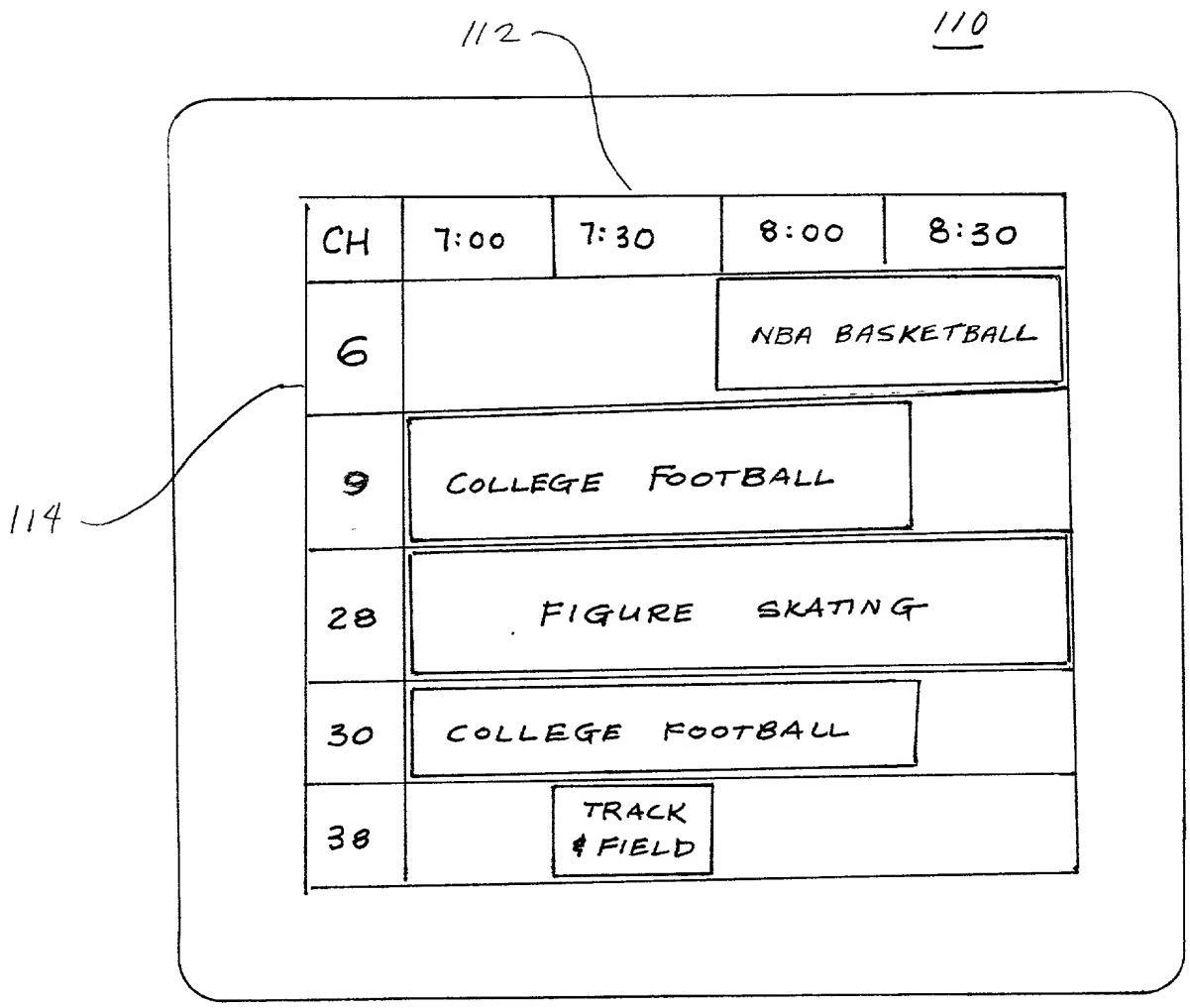
110
112
114
CH
7:00
7:30
8:00
8:30
6
NBA BASKETBALL
9
COLLEGE FOOTBALL
28
FIGURE SKATING
30
COLLEGE FOOTBALL
38
TRACK & FIELD

FIG. 8(a)

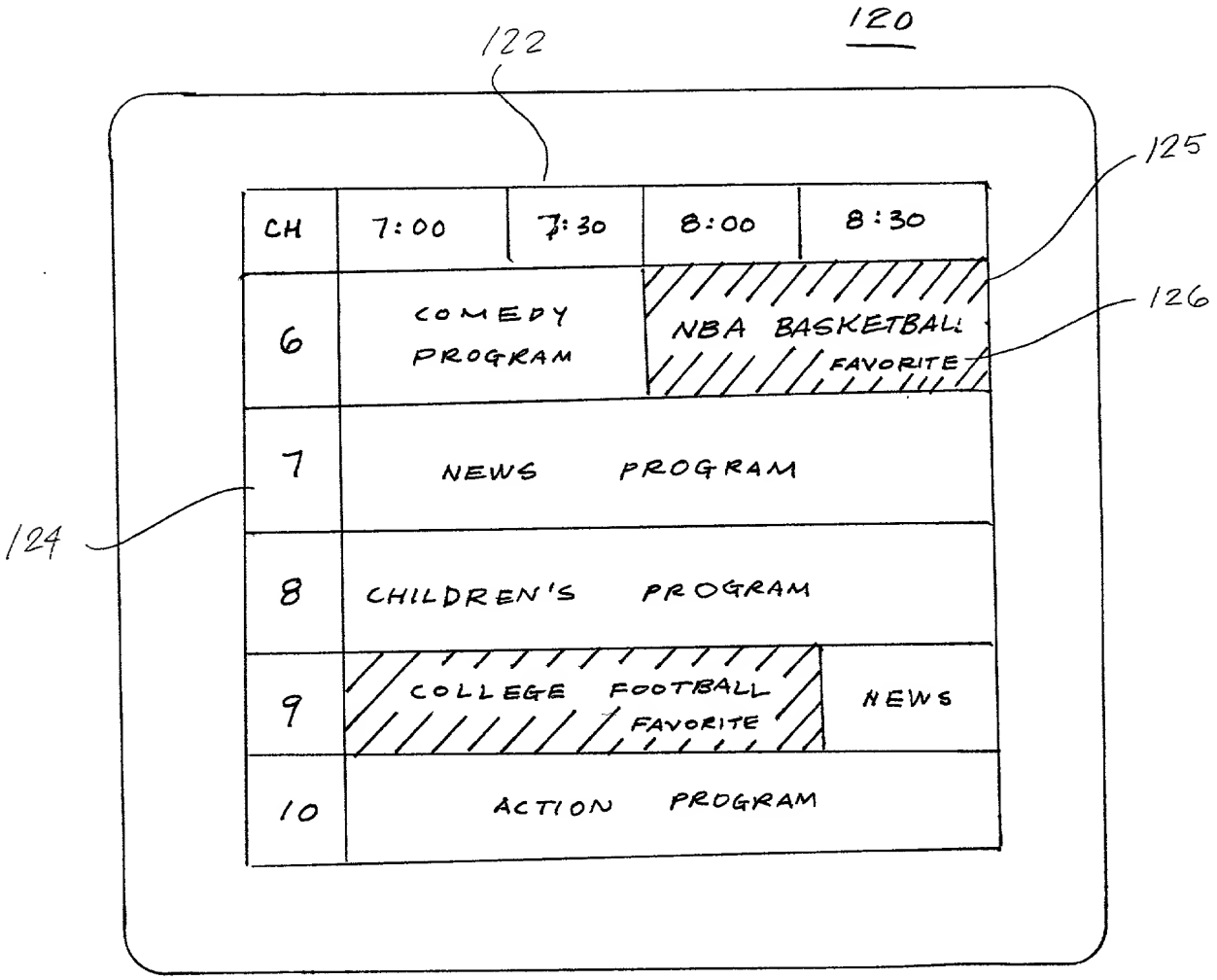
120
122
125
126
124
CH
7:00
7:30
8:00
8:30
6
COMEDY PROGRAM
NBA BASKETBALL
FAVORITE
7
NEWS PROGRAM
8
CHILDREN'S PROGRAM
9
COLLEGE FOOTBALL
FAVORITE
NEWS
10
ACTION PROGRAM

FIG. 8(b)

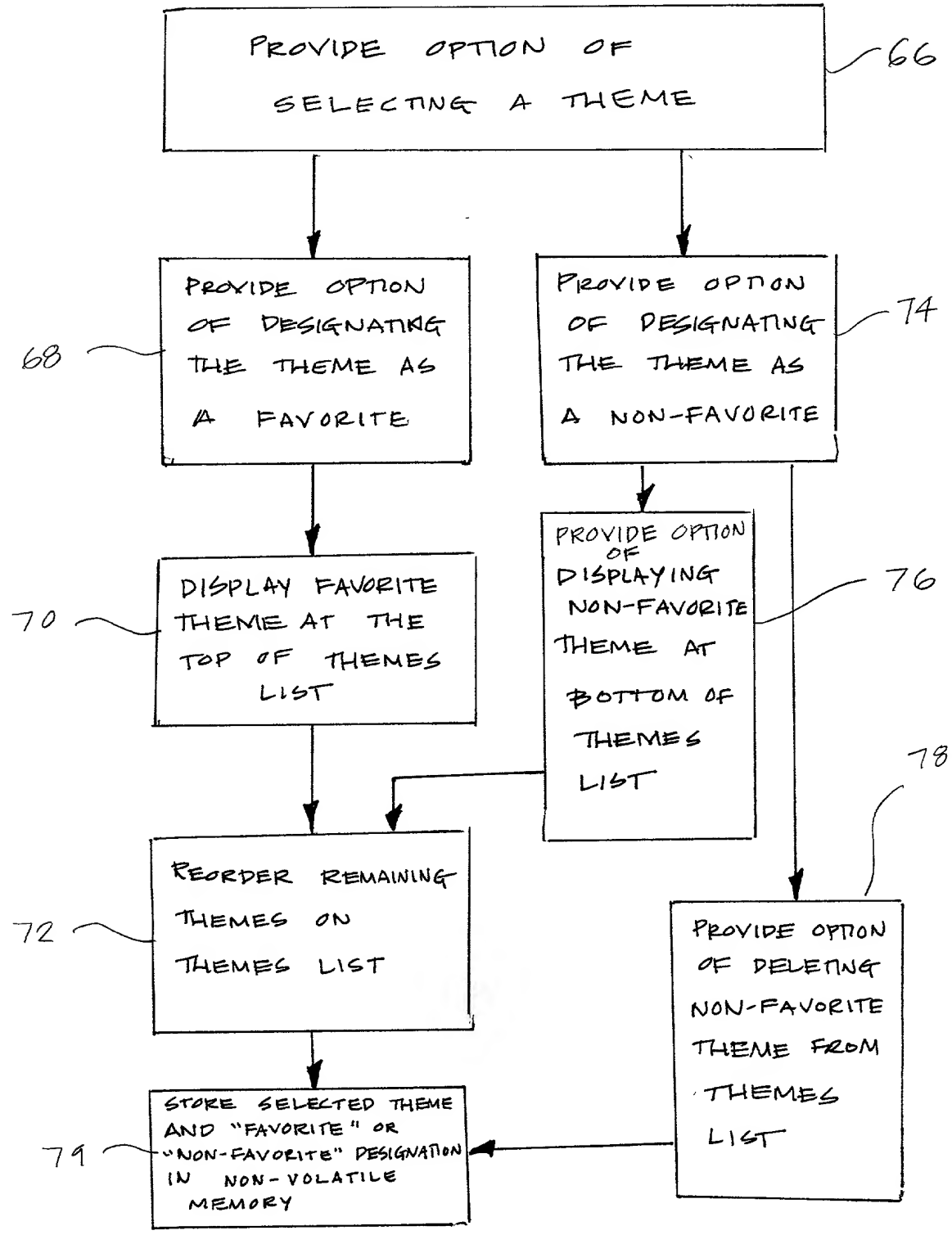
PROVIDE OPTION OF SELECTING A THEME
66
PROVIDE OPTION OF DESIGNATING THE THEME AS A FAVORITE
68
PROVIDE OPTION OF DESIGNATING THE THEME AS A NON-FAVORITE
74
DISPLAY FAVORITE THEME AT THE TOP OF THEMES LIST
70
PROVIDE OPTION OF DISPLAYING NON-FAVORITE THEME AT BOTTOM OF THEMES LIST
76
REORDER REMAINING THEMES ON THEMES LIST
72
PROVIDE OPTION OF DELETING NON-FAVORITE THEME FROM THEMES LIST
78
STORE SELECTED THEME AND "FAVORITE" OR "NON-FAVORITE" DESIGNATION IN NON-VOLATILE MEMORY
79

FIG. 9

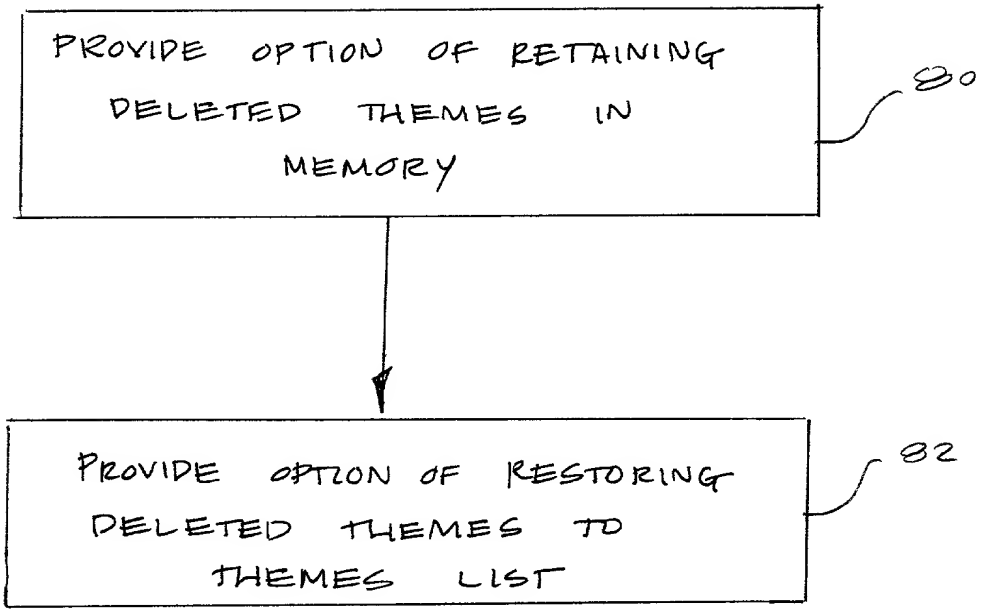
PROVIDE OPTION OF RETAINING DELETED THEMES IN MEMORY
80
PROVIDE OPTION OF RESTORING DELETED THEMES TO THEMES LIST
82

FIG. 10

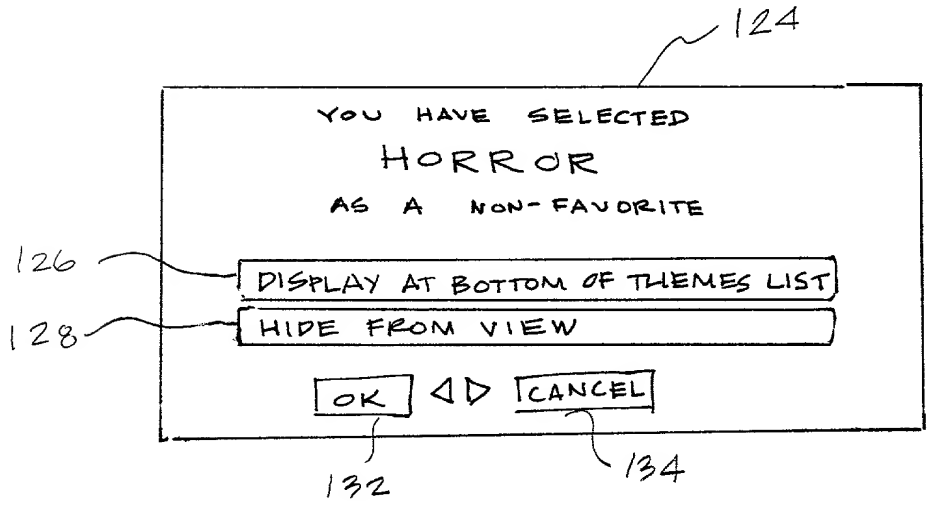
124
YOU HAVE SELECTED
HORROR
AS A NON-FAVORITE
126
DISPLAY AT BOTTOM OF THEMES LIST
128
HIDE FROM VIEW
OK
CANCEL
132
134

FIG. 11

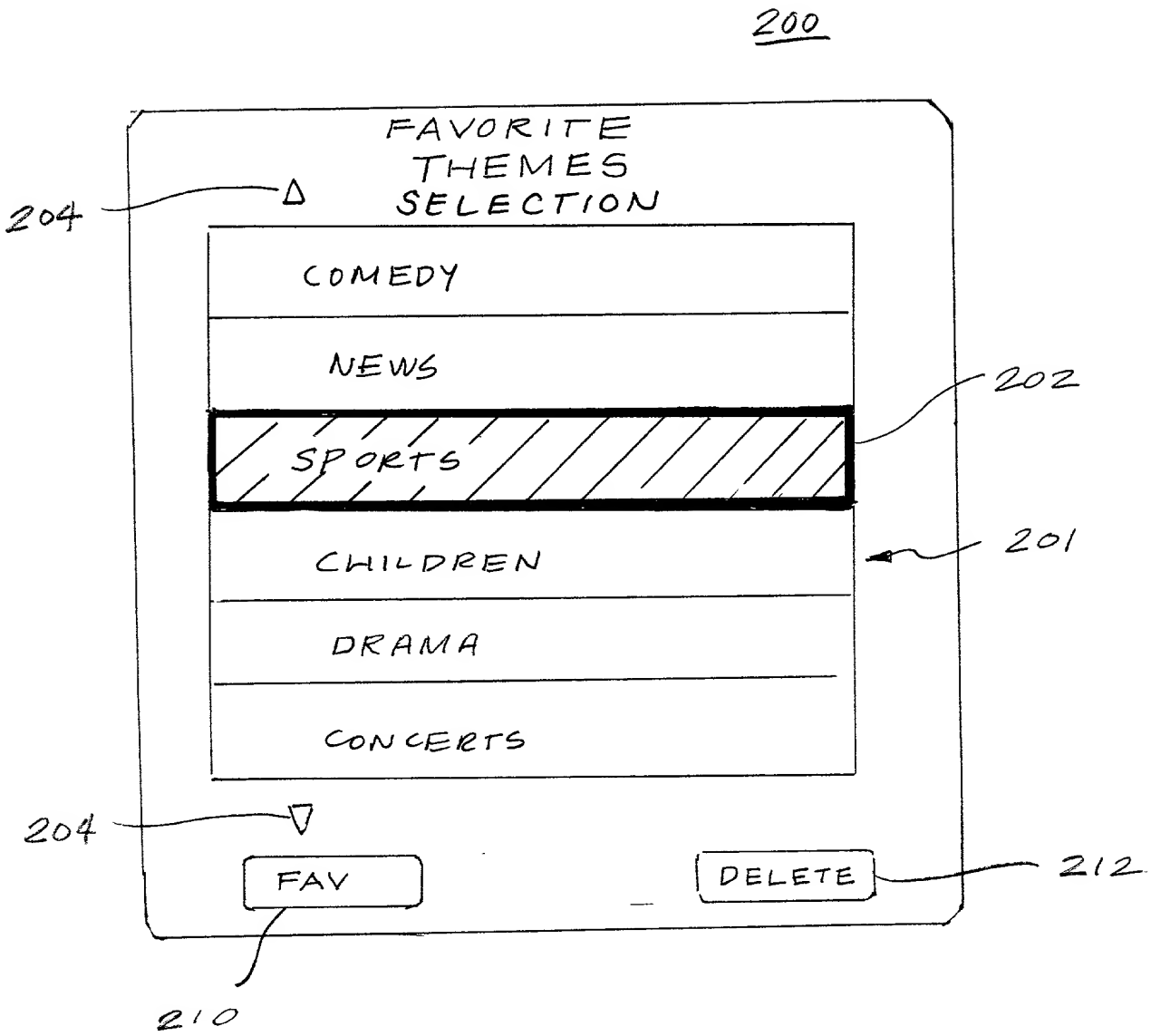
200
FAVORITE
THEMES
SELECTION
204
COMEDY
NEWS
SPORTS
202
CHILDREN
201
DRAMA
CONCERTS
204
FAV
DELETE
212
210

FIG. 12

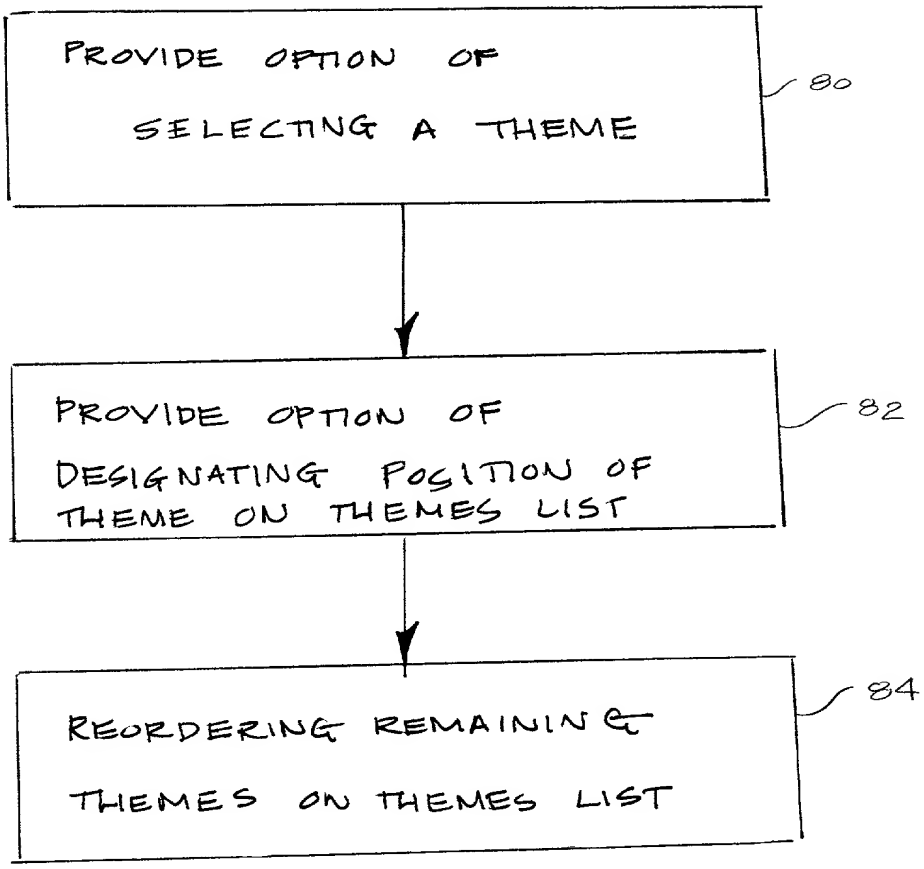
PROVIDE OPTION OF SELECTING A THEME
80
PROVIDE OPTION OF DESIGNATING POSITION OF THEME ON THEMES LIST
82
REORDERING REMAINING THEMES ON THEMES LIST
84

FIG. 13

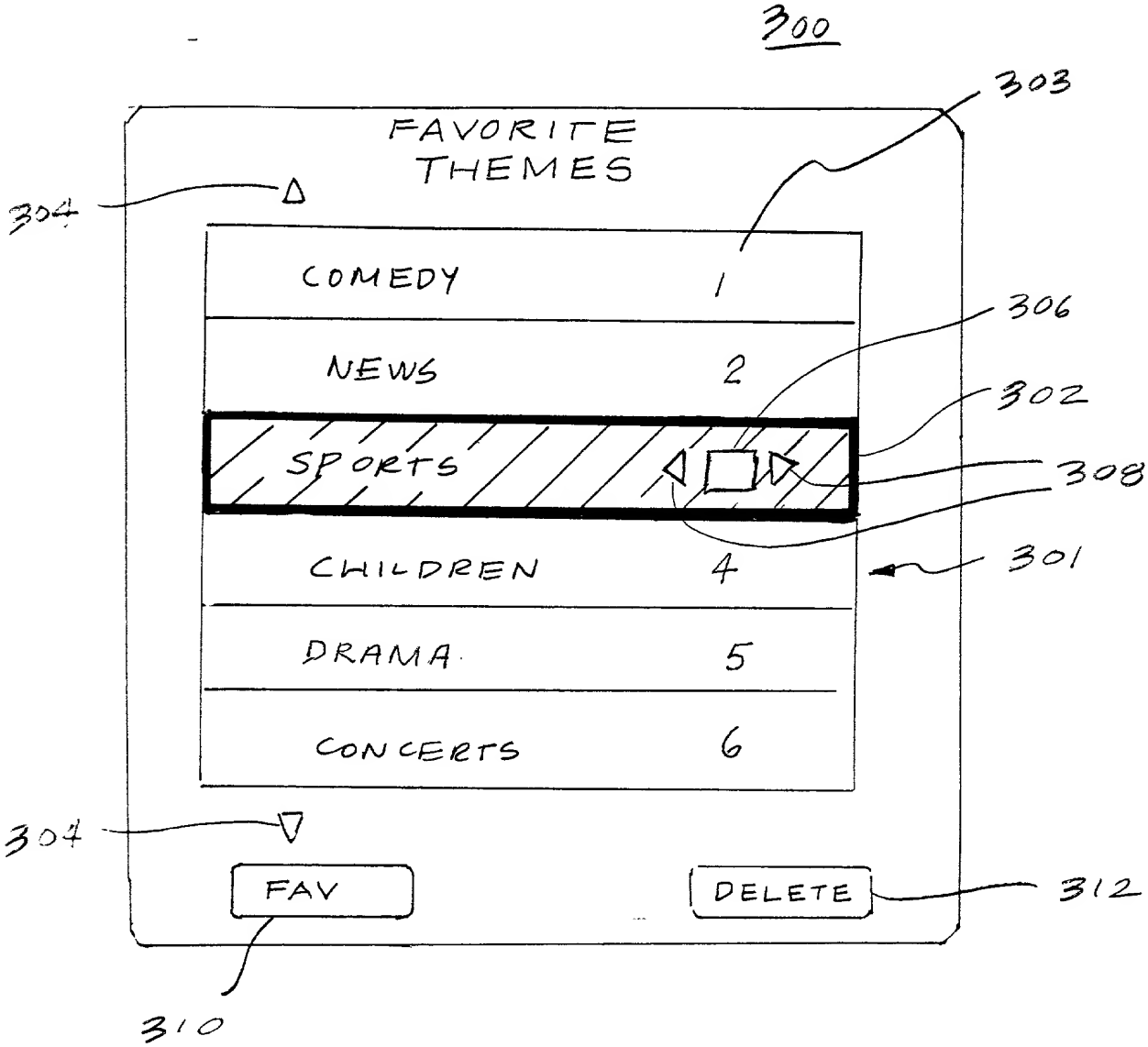
300
303
FAVORITE THEMES
304
COMEDY 1
NEWS 2
SPORTS
306
302
308
CHILDREN 4
301
DRAMA 5
CONCERTS 6
304
FAV
DELETE
312
310

FIG. 14

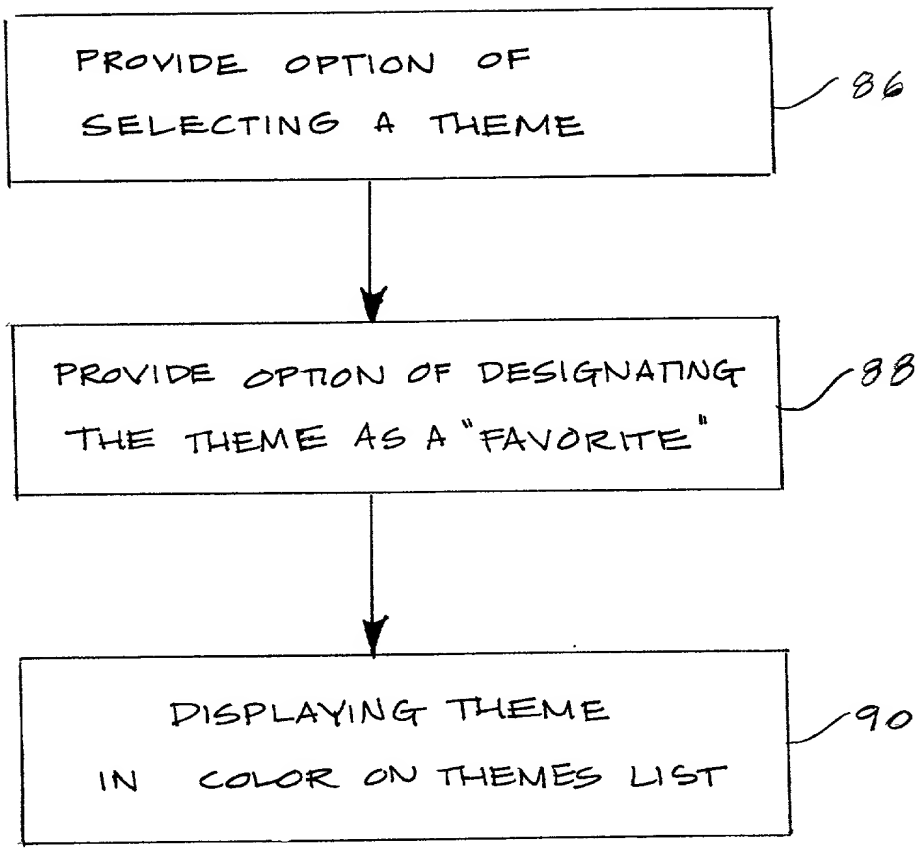
PROVIDE OPTION OF SELECTING A THEME
86
PROVIDE OPTION OF DESIGNATING THE THEME AS A "FAVORITE"
88
DISPLAYING THEME IN COLOR ON THEMES LIST
90

FIG. 15

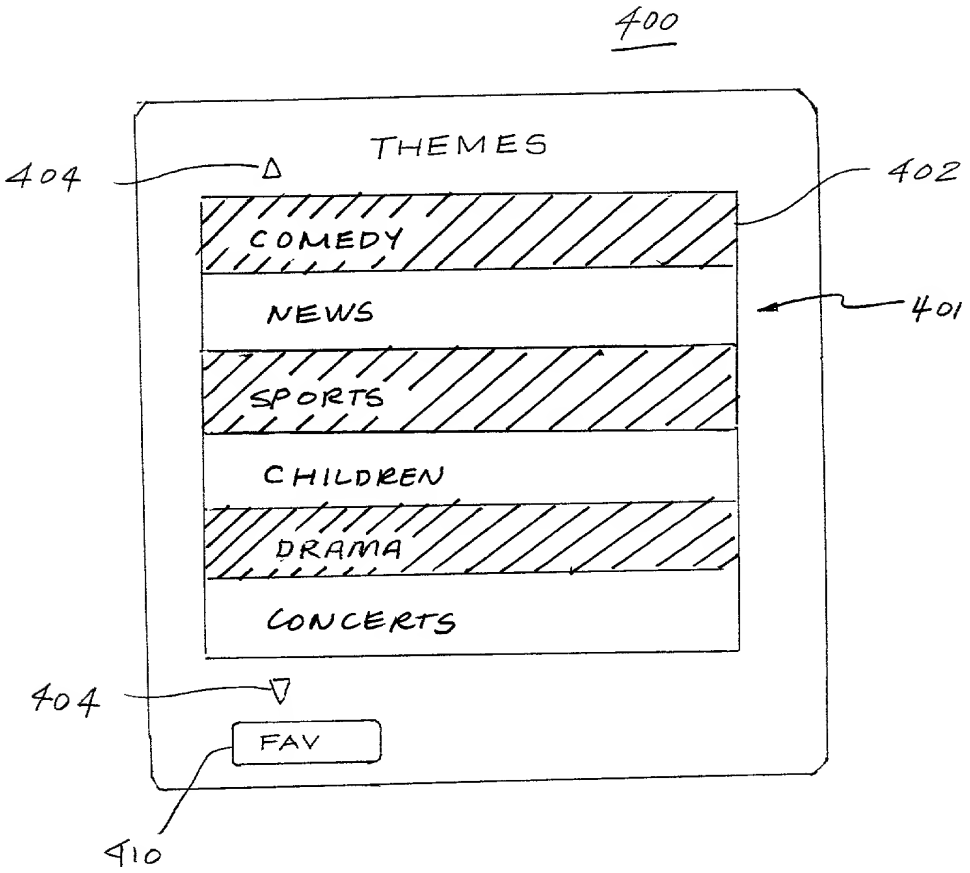
400
THEMES
404
402
COMEDY
NEWS
401
SPORTS
CHILDREN
DRAMA
CONCERTS
404
FAV
410

FIG. 16

500

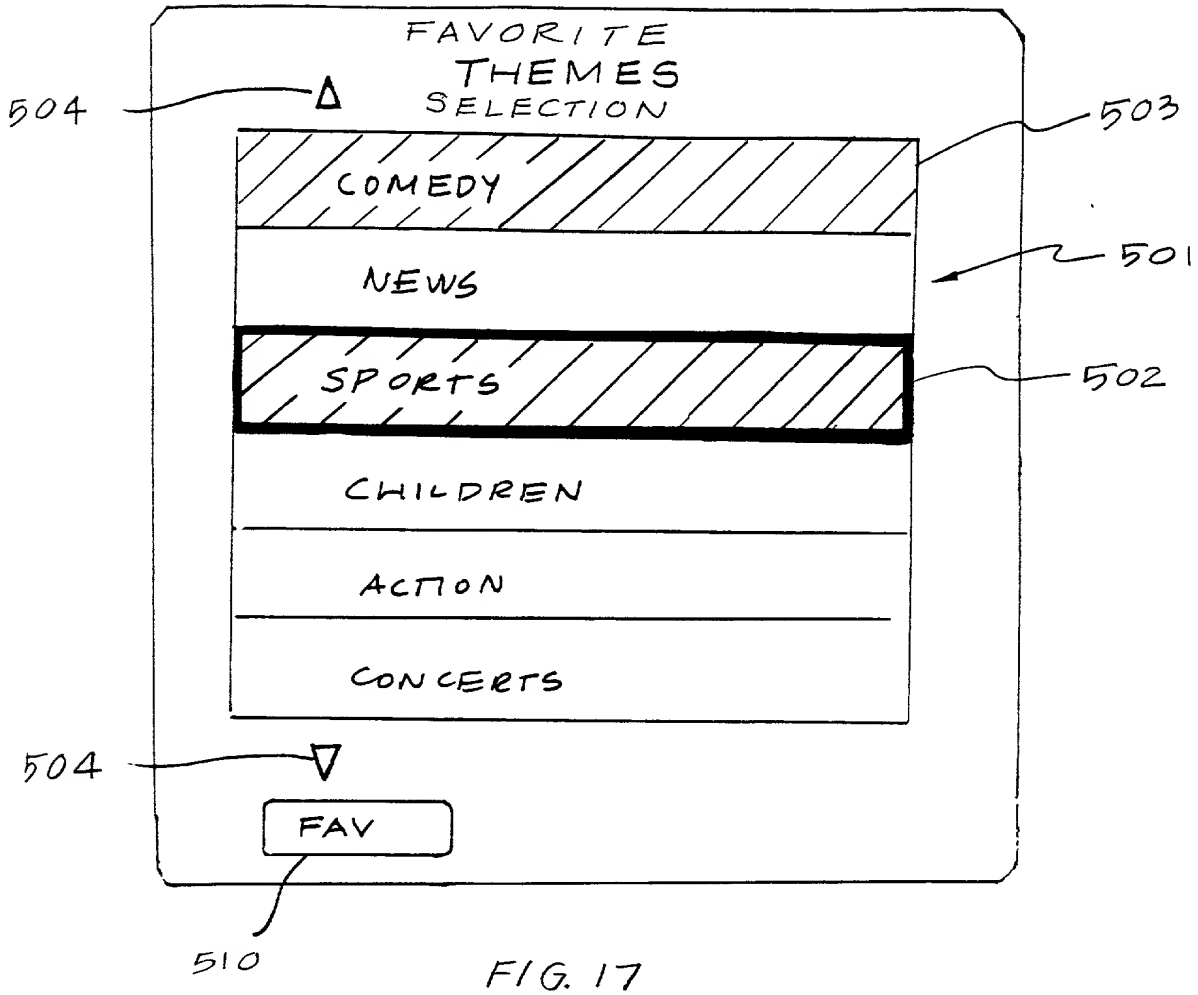

FIG. 17

550

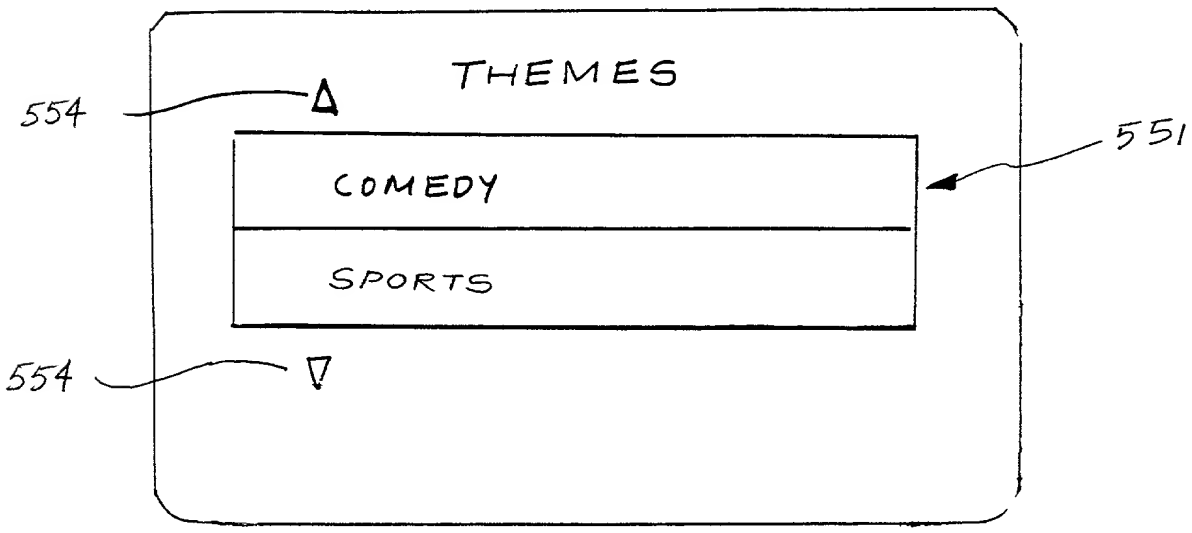

FIG. 18

UV-81

DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name;

I believe I am an original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

PROGRAM GUIDE SYSTEM WITH USER DESIGNATED FAVORITE THEMES

the specification of which

[X] is attached hereto

[ ] was filed on _____
as Application Serial No. _____.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims.

I do not know and do not believe that the invention was ever patented or described in any printed publication in any country before my or our invention thereof or more than one year prior to this application.

I do not know and do not believe that the invention was in public use or on sale in the United States of America more than one year prior to this application.

I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known by me to be material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, § 119(a)-(d) of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)

(Number)	(Country)	(Filing Date)	Priority Claimed [ ] Yes [ ] No

I hereby claim the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below.

60/089,730 (Application Serial No.) June 18, 1998 (Filing Date)

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known by me to be material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)

As a named inventor, I hereby appoint the following attorneys or agents to prosecute this application and transact all business in the United States Patent and Trademark Office connected therewith:

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New York, New York 10020-1104

Direct telephone calls to: Walter M. Egbert III
(212) 596-9112

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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D-5005.6-US-P0